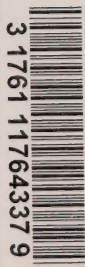Collective Reflection
on the Changing
Workplace

Réflexion collective sur
le milieu de travail
en évolution

National Forum

The Information Highway and Workplace Issues: Challenges and Opportunities

Final Report

*Vancouver, Calgary, Toronto, Hull
Montreal, Moncton*

Canada

LT-062-06-97E

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Human Resources
Development Canada

Développement des
ressources humaines Canada

JUL 3 1 1997

Professor Janet Salaff
Centre for Urban & Community Studies
426-455 Spadina Avenue
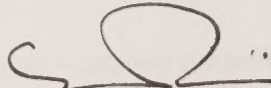Toronto, Ontario
M5S 2G8

Dear Participant:

Last February, you participated at the National Forum on the Information Highway and Workplace Issues. I am pleased to send you a copy of the Final Report of the National Forum.

The National Forum on the Information Highway and Workplace Issues was held to bring together representatives from organized labour, business, academia and other sectors involved in information technology in the workplace to discuss the critical and emerging issues affecting work and Canadian workers. A total of 235 people participated at the six sites across Canada, and as you will see from the National Forum Report, each site produced its own regional report. The National Forum was designed to highlight the richness of the discussions and presentations. As such, it reads as an account of what was said and discussed at each of the regional and national fora, including the video conference of Day 2.

The results of the National Forum are already being used. The members of the Advisory Committee on the Changing Workplace used National Forum discussions in their respective reports compiled in the *Report of the Advisory Committee on the Changing Workplace*, released July 7th. As well, the results of the National Forum will be considered in preparing the *Report of the Information Highway Advisory Council*, which is expected for release in the Fall.

On behalf of the Minister of Labour, the Honourable Lawrence MacAulay, I would like to thank you for your participation at the National Forum on the Information Highway and Workplace Issues.

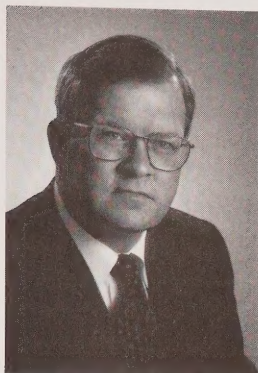Nicole Senécal
Assistant Deputy Minister
Labour

Attachment: 1

Canada

The Honourable Lawrence MacAulay, P.C., M.P.
Minister of Labour

It is with pleasure that I release the Final Report of the National Forum on the Information Highway and Workplace Issues.

The National Forum was part of the activities of the Advisory Committee on the Changing Workplace, a committee chaired by the Honourable Alfonso Gagliano, at the time Minister of Labour.

The Forum was held February 21 and 22, 1997, as part of the federal government's response to the recommendations made in the Information Highway Advisory Council's Report (IHAC). Its purpose was to examine the challenges and opportunities presented by the Information Highway with respect to the workplace and to ensure that issues which impact on employment, skills and training, and labour standards receive wide public discussion.

The Final Report presents the results of the National Forum on the Information Highway and Workplace Issues. The fact that this National Forum took place simultaneously in six different national sites, using innovative information technology to link up all participants for discussion and debate, is reflected in the richness of the Report's regional and national perspectives.

I wish to thank the participants of the National Forum for their views and opinions. I appreciate their efforts in looking for ways in which workers and employers can develop effective strategies in adapting to the impact of the information highway on workplaces.

During my time as Minister of Labour, I plan to continue discussions with working Canadians and seek ways we can address the concerns of workers regarding the impact of information technology on work, and contribute to workplaces that are productive and supportive of workers' needs.

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Foreword

The *Collective Reflection* on the Changing Workplace is an opportunity to initiate broad dialogue on the nature of changes in the workplace, and what kind of workplace we want in the future. As part of its mandate to explore the current issues affecting workers and workplace, the Collective Reflection sponsored the National Forum on the Information Highway and Workplace Change. What was heard and learned at the National Forum will be incorporated into the Final Report of the Collective Reflection.

The National Forum on the Information Highway and Workplace Issues was held to identify the challenges due to the transformation of information technology, how they affect Canadian employers, workers and workplaces; and to begin to identify the solutions to these challenges. The National Forum agenda and design was developed in partnership with unions and business organizations. In addition, to ensure that regional perspectives and experiences were heard, the National Forum discussions took place simultaneously in six different sites across Canada - linked together using video conference technology.

This Final Report has been compiled from oral reports on what was presented, discussed and proposed by participants at the National Forum. Participants represented three sectors: organized labour, business and those representing academia, professional and nonprofit organizations. All brought their experience and an understanding of the impacts of information technology, and all came prepared to hear and discuss new ways of doing business, as well as to learn of the concerns and problems being faced by different sectors.

The most useful aspect of the National Forum Final Report is the range of perspectives and information shared by participants: best practices, partnerships between employees and employers, and the frank discussions of differences balanced by the desire to find solutions of common benefit.

Alfonso Gagliano

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National Forum

The Information Highway and
Workplace Issues:
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Overview

*"The new industries that spring up around the Information Highway will
generate many thousands of new jobs in Canada. They will also demand
new kinds of skills and different types of work arrangements. Inevitably,
there will be job losses in some areas and job gains in others."*

— "Building the Information Highway: Moving Canada into the
21st Century"

One of the Federal Government's responses to the recommendations raised in the
Information Highway Advisory Council's (IHAC) Report and Minority Report, was to
convene a national forum to, "examine the challenges and opportunities presented by the
Information Highway with respect to the workplace," and to ensure that such issues as
impact on employment, skills and training, and labour standards receive wide public
discussion.[1]

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[1] Page 21. Government of Canada. *Building the Information Society: Moving Canada into the 21st
Century.* Referring to issues raised in both the IHAC and Minority Reports, the text notes: "In order to
ensure that these issues receive wide public discussion, they [Government of Canada] will *convene a
national forum* with involvement by the Canadian labour movement.

The Collective Reflection on the Changing Workplace, is a vision exercise initiated by the Minister of Labour, Alfonso Gagliano, to examine the changing workplace and explore the issues arising from workplace change. One of the initiatives undertaken by the Collective Reflection, was to convene the National Forum on the Information Highway and Workplace Issues, in collaboration with national organized labour and business representatives.

The National Forum was held February 21st and 22nd, 1997 in six different sites across Canada: Moncton, Montreal, Toronto, Calgary, Vancouver, and Hull (national site). For Day Two of the National Forum, all sites were connected, using video conference technology, to permit discussion and information exchange. It is estimated that approximately 200 invited participants attended the National Forum.

National and Regional Input

National and regional planning committees developed the Forum themes, identified case studies and research to be presented, and participants to be invited. At each regional planning committee, organized labour and business representatives worked in partnership with HRDC to ensure equal numbers of participants from union and business sectors, as well as identify participants from levels of government, education, and nonprofit organizations. In this way, the agenda of each Regional Forum was based on regional needs, and regional perspectives became part of the national approach to addressing workplace change.

The national planning committee identified the three key topics for discussion at all Forum sites:

- the impact of the information highway on the workplace (current information and research, implications for skills development, impact on jobs, etc.),
- new approaches to work that utilize information technology (case studies),
- working to ensure worker protection.

National Forum Results

This National Report is comprised of all regional fora reports plus the Day Two Video Conference summary. Each regional forum report summarizes the case studies and research presentations made. The National Forum Report will also be available on the Collective Reflection Web Site, the HRDC Labour Web Site, and the Industry Canada Web Site.

Although it was not the purpose of the National Forum to make recommendations, several common themes emerged:

- There is no universal solution for addressing workplace change: what can positively affect one group, can negatively affect another. Government can facilitate partnerships between business and organized labour to find solutions that reduce negative impacts.
- There is need for a national vision to stimulate the development of information technology, and to measure the impacts of technology on the workplace.
- Participants were concerned about the impacts of information technology on society: on families, communities, and on workplaces.
- Health, safety and security must be a consideration, especially for those who work at home or in nonstandard situations. It was noted that the Canada Labour Code does not address the impacts of information technology.
- Unions and businesses support the training and education of workers to preserve jobs, and to improve the adaptability of workers.

The main purpose of the National Forum was to create a venue that encouraged the sharing of different perspectives. What follows is just that - the compilation of different regional perspectives, different voices, and frank discussion that was balanced by the desire to find solutions of mutual benefit.

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National Forum

The Information Highway and
Workplace Issues:
Challenges and Opportunities

National Forum Video Conference

Agenda

Saturday, February 22, 1997
Phase IV, Place du Portage, Room 335

Saturday, February 22, 1997

11:00*	Participants meet for Briefing
12:00	Welcome and Introductions
	Chair — Minister of Labour, **The Honourable Alfonso Gagliano**
12:10	Regional Forum Reports:
	Moderator — **Mel Cappe**, Deputy Minister, Human Resources Development
	Comments and discussion
13:45	**Break**
14:00	Key Note Address — **The Honourable Alfonso Gagliano**
14:20	Panel: *Looking Ahead*
	Moderator — **Mel Cappe**
	• Commentary by selected representatives of different sectors and from all of the Regional Fora
	• General discussion
15:20	Conclusion and Wrap Up — **The Honourable Alfonso Gagliano**
15:30	**Adjournment**

*National Forum Video Conference begins at 12:00 EST

Welcome and Introductions

The Honourable Alfonso Gagliano, Minister of Labour, welcomed participants in Moncton, Montréal, Toronto, Calgary, Vancouver and Hull and expressed his interest in hearing the results of their discussions. "As you know, I am interested in the workplace and in the impact of the Information Highway on workers," the Minister said. He stressed the importance of appreciating the different impacts on different people.

Regional Forum Reports

The Chair of each Regional Forum was asked to give a brief report, noting the key points raised during Day One discussions. (note: full summary reports from each Regional Forum are included in this National Forum Final Report)

Atlantic Regional Forum (Moncton)

Aldéa Landry, Chair of the **Moncton Forum**, explained that 42 participants had participated in the bilingual debate. They recommended that the Web site for *Collective Reflection* be kept; that the report on the current discussions be added to it; and that a new collective discussion group be created on issues specific to Atlantic Canada.

Trudy Brake (Newfoundland Association of Public Employees Union) and David Hawkins (Hawk Communications, Inc.) presented four points of agreement:

- Workers need the protection of minimum labour standards.

- Opportunities must be created for business and workers to tackle issues and reach creative solutions together. DEVCO, in Cape Breton, is a good example of a partnering approach where a letter of understanding on partnerships has been included in the collective agreement.

- There is a need for ongoing training and frequent retraining. Workers must be open to training and become better at identifying short- and long-term training needs.

- The government has a significant role to play, as an exemplary employer for instance. It should also identify role models and survey best practices in both the public and the private sectors. For example, it could look at corporate governance and see how boards of directors can ensure that best practices are part of their work.

Quebec Regional Forum (Montreal)

Josée Goulet, Chair of the **Montréal Forum**, identified the four main focuses of the Montréal discussions:

- The social and organizational impact of new technologies: Awareness programs, empowerment, information and training are needed. In addition, new management and negotiation practices are required, as well as government support programs for unions and other groups.

- The success of the new information technologies will require the commitment of all participants from all sectors.

- Measures must be set up to protect jobs and support affected workers. They include:

  - Training, in order to create a proper environment for IT: Pilot training projects are an option.

  - Development of IT acquisition by industries and citizens: There must be a commitment to look for solutions for independent workers and teleworkers.

  - The impact of virtual trade on small and medium businesses must be taken into effect.

  - French content must be encouraged on the Information Highway.

- The reflection process needs to be globalized. There must be an exchange of information with other countries.

Ontario Regional Forum (Toronto)

Alexandra Dagg, Chair of the **Toronto Forum**, reported that the following common themes had been identified during the Toronto discussions:

- Need to recognize the hidden costs associated with the new technologies, such as health costs for example;

- High level of unemployment;

- Growing trend towards home, part-time and short-term work;

- Changes that are positive for some but not for all (return to the dark ages?);

- No more job security, although it is still a need;

- Need for training (the result of the downloading of responsibilities on individuals);

- Blurring of the frontier between work and family life: a new reality that must be accepted or a need to protect family life?

- Polarization between those who have too much and those who don't have enough work;

- Issue of accessibility.

Toronto discussions also explored the issue of the role of government. Participants felt that government should:

- Protect workers and recognize that the application of technology is not neutral. It is experienced differently by different people;

- Assess the impact of technology on people the same way they assess the impact of projects on the environment;

- Amend the Labour Code;

- Make it possible for Unions to organize home and part-time workers, etc.;

- Enforce minimum standards;

- Provide a national child care program;

- Encourage employers to provide more training (example: through a shorter work week);

- Be a model employer.

Dagg concluded by saying that they had run out of time and needed more time to discuss issues -- such as the issues associated with mega cities, for example.

Prairie Regional Forum (Calgary)

Andrew Sims, Chair of the **Calgary Forum**, reported on a vigorous debate and a definite willingness to discuss and resolve issues. The themes identified included:

- The Information Highway has a human impact. We must recognize that technology is a tool for achieving human aspirations and not an end in itself.

- There are national and worldwide implications but they must be addressed locally.

- Work is changing. It is becoming less secure and more contingent. There is a trend towards flattening management. Work is becoming less time and place dependant.

- Information Technology (IT) raises concerns:

  - Jobs are being lost;
  - Not all the jobs created are good jobs;
  - IT can be used to monitor employees;
  - Increased adaptability is expected from workers;
  - IT is not always user-friendly at first;
  - Employers need to be sensitive to workers' needs.

- Training and retraining priorities must be established. Who should pay for initial training and retraining?

- There must be equitable access to learning. Participants suggested rewards for employers for supporting training.

- Sectoral councils could play a role in training.

- Opportunities afforded by IT include:

  - More convenience and less stress for workers through new arrangements like telework and home work -- however, home space and safety issues must be taken into account;
  - Potential to create a competitive advantage;
  - Immediate access to information for employees;
  - Improved client service;
  - Improved communications -- space and time are no longer barriers (This is especially important in a big country like Canada.);
  - Potentially, a more enabled workforce.

- A number of issues need to be addressed to achieve the potential of the Information Highway:

  - Worker protection;
  - Open communications among all stakeholders;
  - Co-operative decision making;
  - Updated labour codes;
  - Recognition of skills across boundaries;
  - Portability of benefits;
  - Benefits for part-time workers.

- The strategy proposed in the Minority Report was endorsed: there should be a focus on social goals, and the establishment of a job strategy agenda, as well as a strategy for home work.

British Columbia Regional Report (Vancouver)

Manisha Bharti, Chair of the **Vancouver Forum**, presented the following needs identified by the group:

- A clear vision for Canadian society: then, we can look at how IT fits into this vision;

- Accessibility of IT and of learning: we must remember that technology is no magic potion;

- Economical security: in transition periods, jobs are less secure and the insecurity is compounded by the precarious work situations introduced by the new technologies;

- Involvement and inclusion: technology can be an enabler if properly managed;

- Collective bargaining, as a way for people to come to an understanding of how IT can be managed;

- Pilot projects (with government as a model employer and as a collector of best practices);

- Ongoing consultation, for technology is always changing.

National Forum Site (Hull)

Serge Brault, Chair of the **Hull Forum**, reported on the discussions in his group. Participants first discussed the IT phenomenon. They agreed that:

- IT is a wide-ranging phenomenon affecting all sectors of the economy.

- In itself, IT is neutral. What matters is the implementation process.

- Little is known on the specific impacts of IT on the workplace. There is a lot left to learn on the nature and range of IT and its effects.

- Canada is in a good position to benefit from IT if it takes the proper steps at the right time and takes into account the different impacts on women and men.

Regarding the issue of the impacts on the workplace, participants underlined the following points:

- The investment in the human capital is crucial.

- There is a need for basic and digital literacy.

- There is a productivity paradox: IT has yet to deliver significant productivity gains.

- The introduction of IT has brought about a range of shifts in the types and the distribution of jobs. As a result, there is a need for lifelong learning and job training. Strategies, policies, and production measurement tools need to be developed jointly by all stakeholders.

- Self-employment is on the rise but it is ill-defined. This area needs further research and clearer definition.

- Current labour standards do not meet the needs of precarious work and are not adapted to the new workplace.

Hull participants then discussed policy directions:

- Job protection and creation strategies must be developed.

- The issue of flexibility in the workplace needs to be addressed jointly by all stakeholders. No one size can fit all. Sectorial Councils need to remain involved in the development of strategies and labour standards.

- Government, in the view of most participants, should act as a facilitator of the process. Labour stressed the need for government to develop minimum standards.

- Tax, health care, education and social policies need to be lined up to address mobility and flexibility needs.

- All the issues raised in the Minority Report need to be addressed further.

- An ongoing collaborative process is needed to prepare for the future and manage the down sides of IT.

Mel Cappe, Deputy Minister of Human Resources Development Canada, and co-chair of the Video Conference, noted that a common theme came up in all the regional discussions: the need for the different players to work hand in hand. There appeared to be, however, some differences of opinion and nuance among the regions' recommendations on what needs to be done. Mr. Cappe invited comments, and an open discussion was held for approximately twenty five minutes.

Video Conference Discussion

Paul Patterson, University College of Cape Breton (Moncton), spoke of the need for the government to play a role in helping identify the skills needed. There is a need for additional research on telework, especially on its psychological implications (isolation, loss of a sense of belonging, etc.). There should be a progressive follow-up process to this Forum: "Let's clear up the easy issues, then move on to the more thorny ones."

Adrien Charette, CUPE (Moncton), said that the federal government should participate in protecting workers in technology areas. It should also establish a training program. Aldéa Landry (Moncton) suggested a training savings plan to which workers could contribute the same way they do to RRSP plans.

A Montréal participant noted that greater flexibility and creativity is required from entrepreneurs as a result of the opening up of new fields of activity by new technologies. "IT will enable small firms to compete with larger ones," the speaker stated.

Michel Doré, CSN (Montréal), spoke of the major social impacts and democratic aspect of IT. "Unions want to be proactive," he said. He asked the following questions:

- Would government be willing to have a collective reflection on new types of work, their impacts, and the measures needed to improve the working conditions of these workers?

- Would it be a valid solution to set up a body that would be a technology agency and would monitor the impacts of IT on employment and working conditions?

- What does government plan to give unions, if they are to play an important role, to make their members aware, now that the federal support program for training unions has been abolished?

Tom Baker, Social Planning Council of Metro Toronto (Toronto), noted that Canadian productivity has been going down since 1991. What legislative plan will be put in place to address issues in an intergovernmental way?

Jennifer Stevens (Toronto), remarked that, since June 1995, Canada has been a signatory of the ILO Convention that made recommendations to address the issues raised by home work: "What is the federal government doing?"

Laurel Ritchie, CAW (Toronto), said that the federal government seems to be abandoning its role in the area of lifelong retraining. What is it planning on doing to ensure that workers do not have to pay the price of training, as that would mean "mortgaging their future and sacrificing the little free time they have"?

Sean McManus, Alberta Union of Public Employees (Calgary), stated that unions must be involved in the decision making process. It must be recognized that IT is a tool, he stated, asking: "When are the good jobs coming?"

Bob Russell, University of Saskatchewan (Calgary), said that best practices should be catalogued and studied. It is also important to look at the differential impact on women. He asked how the proposals from the different fora would be tied together.

Teresa Marshall, a small business employer (Vancouver), expressed concern over the role suggested for government. She warned against too restrictive a government approach. "How can the Minister help employers assist their employees? How can government and employers work together?" she asked. It is important for all stakeholders to be represented.

A Vancouver participant commented on the need to recognize the capacity of intellectual capital to move around the world and to address the security issues raised by globalization.

Bruce Gilmour, Canadian Labour Force Development Board (Vancouver), made the following statement: "I am blind. My own experience of IT is that it creates new opportunities for disabled Canadians who could not access work before....You know little about my ability to work and contribute," he told HRDC, Labour, Small Business and the Minister.

Sid Shniad, Telecommunications Workers' Union (Vancouver), said that the discussion should be situated in the context of the current social crisis. Quoting a recent Globe and Mail article on "slave work", he underlined a "growing credibility gap."

Kerry Pither, CUPW (Hull), said that "in reality, technology is not being implemented in a way that allows workers to experience its benefits." She asked how the Minister saw the role of government. Should government be a facilitator for business interest or should it play the strong role of protector of workers required in a democratic society?

Murray Randall, CLC (Hull), commented on the encouraging focus at the Forum on "jointness", "involvement", and "partnering". Collecting bargaining is a mechanism for jointness, he noted. He added that there is a need for government labour standards for non-unionized workers.

Gilles Trempe, CEFRIO (Montréal), said that new models need to be defined to address the fact that some people have too much work and others do not have enough. There is a need for pilot projects to find new ways of doing things.

Richard Long, Communications Energy Paper Workers Union of Canada (Toronto), agreed with the comments made by Trempe. He suggested that government share work by shortening the working week to allow everybody to share into the Information Highway.

Garth Whyte, Canadian Federation of Independent Business (Hull), said that there is a need to stop "talking past one another." IT is "an equalizer," he stated: "Let's look at common issues to push." He identified the challenge of taking advantage of IT without stifling its use.

Mel Cappe summarized the discussion. On one hand, he said, there is a concern for workers, their security and their ability to adapt; on the other hand, there is a concern for economic growth. "There has to be a way to bring the two together," he concluded.

Keynote Address

The Honourable Alfonso Gagliano, PC, MP, Minister of Labour and Deputy Leader of the Government in the House of Commons Hull, Quebec, February 22, 1997

Thank you,

I would like to begin by thanking my colleagues from the Collective Reflection for having chaired the discussions which took place in different parts of the country. Their reports indicate that the participation in the discussions was very enthusiastic, and that the exchanges yielded some very interesting ideas.

I would also like to thank, on behalf of everyone here, all the people who have helped to make this event the success that it is, both at the organizational level and for the substantial discussions it has fostered.

Thanks to the dream of a few visionaries, and the technological know-how of many others, today we are meeting in an environment which does not really exist. It is a virtual world, intangible in the traditional sense. And yet, we are definitely in touch with each other. We can discuss things, we can exchange ideas, even images. We are able to participate in a normal social interaction ... except that we can't shake hands.

"There is no doubt that if we are to remain competitive in an increasingly global economy, Canada must embrace the technological revolution. We must encourage research and development, support higher education, and foster the development of a workforce that is both highly skilled and versatile.

We must learn to accept new approaches to work, and new technology in the workplace. We must adopt new thinking in order to reconcile the many different aspects of our lives, such as family, professional, social and community responsibilities. We must devise new social arrangements, develop partnerships that are currently unheard of, pool our resources in order to stimulate our creativity, and build on our social cohesion."

Minister of Labour, Alfonso Gagliano

The link that binds us together across the vast territory of this country could just as easily bring together isolated communities or distant continents. This is possible thanks to the magic of the information highway. These connections are, of course, only one element of the info-highway's enormous potential.

In fact, the technology that is the foundation of this new mode of communication is so powerful, and has so many different applications, that it is transforming how we live, how we work, and how we structure our society.

Because of this, the technological revolution we are witnessing requires that each of us, both individually and collectively, go through an extensive adaptation process. We must adapt quickly, we must assimilate complex information, we must deal with profound change.

As part of the work of the Information Highway Advisory Council, many of you studied the different aspects of this phenomenon in great detail.

The goal of this National Forum is to focus on the challenges and the opportunities created by the information highway within the workplace.

At the outset, I'd like to state that my primary objective in this area is to foster personal and collective growth.

While it is indeed fascinating, we must remember that technology is, first and foremost, a tool that allows us to reach our full potential.

Used wisely, technology can be a way of overcoming obstacles and creating access for groups that are sometimes disadvantaged in our society. Examples that come to mind are residents of isolated communities, the handicapped, and others who may be constrained by family or community responsibilities.

However, if it is introduced and applied without direction, technology can also be a negative force, isolating people, fueling unemployment, leading to feelings of disenfranchisement and a level of insecurity that is both unhealthy and counterproductive.

The workplace has become an ideal laboratory for observing the different manifestations of this paradox. While technological developments have led to fame and fortune for some, they have also destabilized -- and in some cases have destroyed -- the working lives of many others.

Gaining a better understanding of the rapid evolution of the workplace was my key motivation for launching the Collective Reflection last summer. Since that time, the members of the Advisory Committee have been studying the many different aspects of this issue with great care. That is why I am especially grateful to all of you for having agreed to come out on a Saturday in February to contribute to this part of their

deliberations. Your thoughts and your recommendations on this issue will be listened to with great interest, and I'm convinced that you will recognize elements of what is said today in the Committee's final report.

The Collective Reflection is a visioning exercise; it is an incubator of creativity, a launching pad for new ideas. We don't want to repeat the work of earlier studies, nor revisit the prescriptions of the past. We don't want to do this because we already know where the problems lie.

There is no doubt that if we are to remain competitive in an increasingly global economy, Canada must embrace the technological revolution. We must encourage research and development, support higher education, and foster the development of a workforce that is both highly skilled and versatile.

We must learn to accept new approaches to work, and new technology in the workplace.

We must adopt new thinking in order to reconcile the many different aspects of our lives, such as family, professional, social and community responsibilities.

We must devise new social arrangements, develop partnerships that are currently unheard of, pool our resources in order to stimulate our creativity and build on our social cohesion.

Everyone has a role to play in this evolution. First and foremost, employers and employees must reach out to each other and, together, find solutions to the imposing challenges which they now face.

More than ever, business associations and labour unions must rise above their traditional approaches to become true problem-solvers. All of these groups must find the strength, the courage and the candour to take an honest look at the evolution of the workplace in all its complexity and all of its many facets.

Employers are already investing a great deal of resources in technological development in order to boost their productivity. They have the right -- even the responsibility -- to equip themselves with the best tools in order to compete successful and to create the best return on their investment. But they also have a duty to do this in a way which shows respect for their employees, as well as recognizing the contribution these people make to the success of their business.

At the same time, employees have the responsibility of acquiring skills and actively participating in the evolution of the firm they work for; this is after all the most effective way of protecting their employment. I would add that employees also have the right to share in some fashion in the fruits of increased productivity, and in the eventual increased profitability of the firm.

Balance is the key word. However, at a time of great upheaval, such as the one we are now experiencing, balance requires that organizations, as well as individuals, do their best to adjust and adapt to new realities.

It is that vision, that openness, that willingness to move forward that I find is lacking among certain groups. That absence bothers me a great deal. I would like to see associations, whether they promote the interests of workers or employers, taking on leadership roles in the evolution we are witnessing. I believe they can do this without losing sight of their own mission, or their particular goals.

The modern workplace is changing from day to day. The attitudes and the thinking of its key players must also change, because yesterday's solutions are today's hurdles.

Clearly, in dealing with the changing workplace, governments also have a important role to play, as active partners putting forward constructive, useful ideas.

During the latest meeting of federal-provincial-territorial Labour Ministers, which took place last week in Hull, I saw how my counterparts from across the country are all attempting to put forward long-lasting solutions to the new challenges they face.

Obviously, their approach to the question varies from jurisdiction to jurisdiction, and I am skeptical about some of the approaches I heard about.

Nonetheless, the will to act is there. The different ideologies only underline the importance of consultation and consensus-building, especially when we are dealing with workplace issues.

Governments also have the responsibility of helping individuals and groups gain access to new technology. This crucial role is one that governments must play in order to ensure that less advantaged citizens do not fall behind those who have easy access to the information highway.

Several of the measures announced by my colleague, the Minister of Finance, in the recent Budget, will help us achieve this goal.

One example is the $30 million which will be invested over the next three years that could lead to the interconnection of some 5000 Canadian communities to the Internet. Many of these connection points, located in libraries and community centres, will allow tens of thousands of Canadians to explore the information highway.

We are very much aware of the fact that we are living in a world where knowledge and education are both crucial to long term economic success. That is why our government has taken concrete steps to help students in post-secondary education and their families, including people who would like to improve their skills.

Aside from the measures which will have an immediate impact on our collective progress, the government also intends to mobilize financial resources and human resources in order to begin building the future.

That is the role of the Canadian Foundation for Innovation. Thanks to an injection of $800 million, the Foundation will be able to allocate $180 million a year for five years.

This new independent body, operating at arm's length from government, is designed to help renew facilities and equipment at Canadian post-secondary institutions and Canadian research hospitals.

Many other measures aimed at small and medium-sized enterprises, the development of foreign trade, technology partnerships, and the Industrial Research Assistance Program, will have a positive impact on our economic and technological development. As a result, we will have more competitive enterprises, as well as a workforce whose skills are better suited to the needs of the new marketplace.

Yesterday, the different regional groups mentioned the complexity of the many issues related to the information highway, and the need to deal with them in a comprehensive manner, taking into account the interconnections which exist between them.

In my opinion, that's the only effective way of dealing with these issues. We must all work together, striving for common goals that strike a balance between economic growth and our social and cultural development.

Lifelong learning is both a reality and a necessity.

In order to respond to their respective needs, businesses must be flexible and employees must be versatile.

Governments must be able to modernize standards and regulations so that they help those they serve, instead of holding them back.

We must pool our knowledge and our experience, especially in the areas of innovation, case studies and best practices.

We must chart the future. Not as fortune-tellers, but as visionary leaders, aware of the great potential of our country and all its people.

Once again, I would like to thank you for the contribution you've made to our Collective Reflection on the Changing Workplace.

We all understand that it is essential that we face these many challenges together.

We also know that the only long-lasting solutions are those which are arrived at through consensus -- and that consensus is only possible after a full and frank discussion.

I therefore invite all of you to continue to participate in this reflection process -- today and at every opportunity that presents itself in the future.

Thank you.

Panel Discussion: "Looking Ahead"

Seven panelists had been asked to prepare short opinion pieces for the video conference, on the topic of "Looking Ahead." Seven panelists were selected, representing two from organized labour, two from business, one academic (education), one from government (Quebec), and one nonprofit organization (a social planning council).

Jean Claude Parrot, CLC (Hull), commented on the impressive interventions made over the last day and a half. He said he hoped that there will be a follow up to the Forum. "The challenge is to look at the issues in their context: a high unemployment level, rapid change, mobile work and the fact that all areas are affected by new technologies." A free market approach is not readily seen as a valid solution by the labour movement, he stated. "Wanting to protect workers is different from wanting to return to the old days. The increase of contingent work must not mean the decrease of protection." Collective bargaining can address worker protection issues, he said, but legislated norms are also needed to protect non-unionized workers.

Government's role is seen by the labour movement as that of a facilitator, said Parrot. "Government has allowed the private sector to deregulate and the public sector to cut down staff and services. It has fostered the free market. The time has come to see what can be done for the people who help companies perform." Technology can help improve services, and protect and create jobs if it is really accessible to all. Government should facilitate collaboration with all the social partners, and protect workers when no agreement is reached. "Bill C-66 'as is' would be 'a step forward, as would the amendment of the Labour Code and the implementation of the ILO recommendations. "We cannot succeed without a job strategy and without the clear objective of full employment." The government must support a social clause in free trade agreements.

Suzanne Gadbois, Conseil du Trésor du Québec (Montréal), said that government projects in setting up IT have met with various degrees of success and failure. Most failures have been due to the fact that people have dealt primarily with the technically centered aspects of IT. "It can only be a success if one considers the person using the technology. We need to find ways to make the technology easy to use."

All parties, governments, companies and workers have responsibilities, stated Gadbois. Governments must facilitate social change and design and implement employment strategies in collaboration will all the groups involved. "I hope HRDC will look at ways to ensure that all stakeholders get together on a regular basis," she said. "Current

conditions, with governments aiming for a zero deficit, are difficult." The challenge is enormous, when there are still places that hardly have telephone lines and when even advocates often don't have computers powerful enough to access new technologies.

Ric Irving, Schulich School of Business, York University (Toronto), made the following suggestion to the Minister of Labour: "Benefits are currently attached to jobs. Attach them to individuals. They could include medical, dental, disability, pension and child care. With a social safety net, there will be an outpouring of creativity on the Information Highway."

Mike Sheridan, CLC (Calgary), made reference to a comment made the day before by Bob Russel, University of Saskatchewan, on the fact that when computers came in, they made writing jobs more interesting but also eliminated jobs in his university. "The people who benefit from the new IT are not the same as those paying the price." The experience of workers is different from what is said in conferences like this one. There might be a credibility gap when the government organizes a conference to look for ways to support workers at a time when it is laying off tens of thousands of workers, he observed. "We are discussing a workplace of the mind." Unions must educate their members on issues and help them organize to seize new technologies: "They must look at them as ways to extend economic democracy in the workplace, the same way they have introduced political democracy."

Paul Daigle, Atlantic Chamber of Commerce (Moncton), said that the most interesting aspect of the Forum was the commonality of issues and the obvious desire to find meaningful accommodations. He remarked on the surprising tendency on the part of some participants to "look for quick fixes" through legislation: this is unrealistic at a time when business is asking for more flexibility.

Daigle commented on the difference of views between the private and the public sectors on profit, levels of training, the role of government, flexibility, the need for incentives, market-driven solutions, and corporate governance. He remarked on the small number of CEOs at the Conference: more has to be done to encourage influential people to participate in such events. Business and labour must work together to create wealth: "Business must accept greater responsibility and demonstrate that it recognizes its most important resource -- a highly skilled workforce." This Forum is only the first step of a common approach. Legislations must be adapted to reflect the needs of the information age. A non-adversarial approach must be developed.

Beth Patterson, of Bell Global Solutions spoke of access - as in availability. Whether one lives in Toronto, Biggar Saskatchewan, or Blow Me Down, Newfound - the ability to have access to technology and other people is important.

Access also mean affordability - information technology has created a new level of 'haves' and have nots.' If government, business, unions and organizations can get together like this, then we can do is create, coming into the year 2000, is access for all Canadians.

Michael Goldberg, of Social Planning and Research Council of British Columbia noted the amount of common ground that was right across all Fora, and that he was quite surprised by that. At the same time, challenges were also raised, and that Minister Gagliano had summed them up: are we looking for glory for a few in the future, and fear and insecurity for the many; is there a willingness to find a certain kind of balance to address those issues?

What is needed are common goals and objectives, not just for the short term - is there a place where we wish to get to, is there a common sense of where we want to go? How do we address the ways in which the concerns about fear and economic insecurity are balanced around degrees of profit? Will we all be sharing in the benefits?

The other issue that has been raised frequently is accessibility: the ability to use technology requires other kinds of preconditions to be in place: telephone lines, security, adequate computers to use the latest technology.

We also need to look at how to bring all stakeholders into this process. If the goals of this event is to meet then write up a report, we've missed a golden opportunity. I would hope that the Minister, HRDC and provincial counterparts will look at an ongoing way to deal with some of the very complex issues that begin to address both where we want to go, and then look at how we use the information technology to get there.

Wrap Up

Mel Cappe informed participants that the Minister's remarks would be on the Web on the following Monday. He invited them to mail or e-mail additional comments to *Collective Reflection on the Changing Workplace*.

The Minister thanked participants. "I have organized many round tables for different sectors to come together. It seems on the surface that we have many differences but, when we look closer, we realize that we are not that far apart." Working in collaboration is a way to solve most issues, he said, as indicated by Bill C-66 and the upcoming amendment of the Labour Code on which many people already agree.

"The *Collective Reflection* will finish its report and make recommendations," the Minister continued, "and it will certainly come up with solutions. What is important," he stressed, "is that, in a month, there will be recommendations. It is time to move forward in partnership through policy and consensus," he concluded.

Collective Reflection
on the Changing
Workplace

Réflexion collective sur
le milieu de travail
en évolution

National Forum

The Information Highway and
Workplace Issues:
Challenges and Opportunities

National Report (Hull Site)

Agenda

Friday, February 21, 1997 and Saturday, February 22, 1997
Phase IV, Place du Portage, Room 335

Friday, February 21, 1997 - Hull Forum

09:00 **Welcome and Introductions**

Chair — **Serge Brault** - Advisory Committee on the Changing Workplace

09:15 **Overview of the Issues**

The Impact of the Information Highway on the Workplace - IHAC Discussion Paper

Jean-Claude Parrot, Executive Vice-President, Canadian Labour Congress

Richard Cavanagh, National Director, External Relations, Stentor Telecom Policy Inc.

Discussion

10:15 **Break**

10:30 **Research Base**
Jobs in the Knowledge - Based Economy
A study by the Conference Board of Canada
Speaker — **Brenda Lafleur**, Principal Research Associate

Impacts of the Information Highway on Employment and the Workplace
A study by Goss Gilroy Inc., Management Consultants
Speaker — **Alex Turnbull**, Partner
Discussion

12:00 **Lunch**

13:00 Speaker — **John Gray**, Writer and Composer, and IHAC Member (Via video conference from Vancouver)

Agenda (continued)

13:30   **Case study presentations and discussion**
Chair — **Lars Osberg** - Advisory Committee on the Changing
Workplace

Case 1 —   Retraining staff - continuous learning within the organization
Speakers — **Nancy Leamen**, Director, Human Resources Policy,
Canadian Bankers Association
Catherine Chandler-Crichlow, Manager, Education Centre,
Toronto-Dominion Bank

Case 2 —   Study on telework in the federal public service
Speaker — **Susan Jones**, Projects Officer, Public Service Alliance
of Canada

Case 3 —   Using new technology to benefit postal workers and the public
A case study presented by the Canadian Union of Postal Workers

Case 4 —   Canadian Grocery Producers Council
A joint business/labour approach to human resource planning
Speaker — **Janet Dassinger**, Director, Training Programs and
Policies, National Training Fund, United Food and Commercial
Workers Union

15:30   **Break**

16:00   Challenges presented by the Information Highway
Chair — **Serge Brault**
Panel — **Jean-Claude Parrot** and **Richard Cavanagh**

Key questions to be addressed:

- What are the responsibilities of **individuals** in adjusting to
changes resulting from the introduction of information
technology?
- What is the most appropriate role for **unions** at a time of
significant adjustment to the introduction of new information
technologies?
- What can **employers** do to help their workers adapt to the
changing workplace?

Agenda (continued)

- What role should **governments** play:
  - with respect to protection of workers affected by technological change?
  - to foster workplace adaptation to information technology?
  - to assist management and labour issues of adaptation to information
  - technology?

Comments and discussion

Plans for Hull Forum presentation to the National Forum Video Conference on Saturday, February 22.

17:00   **Adjournment**

Welcome and Introductions

Following welcoming remarks and introductions, Serge Brault gave a brief overview of the National Forum. He explained that it had been organized by the Collective Reflection in response to both the Final Report of the Information Highway Advisory Committee (IHAC), and the Minority Report prepared by Jean Claude Parrot to address the social impacts and the impacts on work and workers of the information technology (IT).

The Forum includes regional perspectives from Vancouver, Calgary, Montreal, Toronto, Moncton and Hull (National Site), and involves approximately 200 participants across Canada. The results of the two days of meetings will be published as a National Report, and will be used by:

- The Advisory Committee on Changing Workplaces in its upcoming report to the Collective Reflection;

- IHAC in its final report;

- The people who helped plan the Forum.

Mr. Brault then introduced Jean Claude Parrot, Executive Vice President of the Canadian Labour Congress, and Richard Cavanagh, National Director, External Relations, Stentor Telecom Policy, Inc. Both would present a short overview of the main issues facing organized labour and businesses in terms of the impact of the information highway on work. Both gentlemen are also members of the Information Highway Advisory Council (IHAC), serving on the "Steering Committee on Lifelong Learning and Workplace Issues." (A copy of their discussion paper, 'The Impact of the Information Highway on the Workplace: a paper to further the discussion of issues related to the introduction of information technology and its effects on Canadians at work', is included in this National Forum Final Report, as Appendix A).

Overview of the Issues: Jean Claude Parrot and Richard Cavanagh

Jean Claude Parrot, Executive Vice President
Canadian Labour Congress

"First of all, I want to say it is important to discuss the social and economic implications of the Information Highway.

We have to realize that we are having this discussion at a time when unemployment is over 9% officially and the recent budget does not offer little hope for the future. We also have to realize that unemployment is not only high in Canada, but also in all OECD countries around the world.

We also have to recognize that the impact of new information technologies may be different than that of past technological change. I have quoted Jeremy Rifkin, who argues that this context of unemployment is quite different than the 1950s to mid 1970s. The rapidity of change is also much greater now than previously. It affects both the demand and supply of labour in the sense that work is more portable and can move beyond national jurisdictions into others.

In the past, new sectors were able to absorb change. Today, all sectors are affected including the public service sector, which was one of the secure sectors that absorbed many changes in the recent past.

Issues such as polarization of income, the deterioration of work experiences for many workers and a range of social problems need to be dealt with now. This requires the use of collective bargaining through unions, but also legislative reforms here and internationally. I'm talking here about enforceable social clauses in trade agreements, for example.

I want to start with the area of nonstandard work. There is a significant proportion of workers who are in nonstandard areas of work who would prefer and need full-time employment. They are involuntarily in a situation of being underemployed.

Many workers are employed part time involuntarily. The creation of full time work needs to be emphasized and today there are no targets, no goals to reduce employment. We have once in a while a program here and there that may create jobs, but we don't have a strategy. I think we need governments that deploy a good national strategy for jobs, and that just does not exist today.

Many part time workers do not have access to employment related benefits. Therefore, we have to address this issue through legislation. There are many examples where benefits have been extended through collective bargaining, e.g., in Canada Post.

Often, part time work means variable hours which can create problems, especially in relation to family responsibilities.

We must also look at income issues for those who don't have enough to support themselves, and this involves the broader context of poverty and income inequalities.

Contingent work - short term contract, self employment, etc. - is insecure and much more common among women, visible minorities and youth.

We have to make a distinction between telecommunting and telework, because the former is associated with skilled professsionals while the latter is associated with low status, low paid work often without proper equipment, regular breaks or no health and safety protection.

Women often end up in isolated low wage ghettos, without access to training. Homework is the subject of a 1996 ILO Convention and Recommendation which focus on legislated protection and enforcement.

Discussion on distribution of work time is obviously timely considering the current high unemployment situation. This is an issue that can be dealt with by government, especially for those who are not covered by collective agreements. Implementation of the recommendations in the Report of the Advisory Group on Working Time and the Distribution of Work would be a good starting point.

A great deal of self employment is also involuntary and precarious. Self employment status denies protection to a large number of people whose positions are insecure, whose income is low and unpredictable. The answer again has to be labour standards legislation including access to health and welfare benefits.

We have reached the stage today in our labour market which, a few years ago, would have been unthinkable. Good full time work have disappeared while nonstandard work has increased. The long term effect will be a Thirties style haves and have nots. This situation can only be changed if governments are committed to full employment.

Part of the solution is high quality, up to date training. I will not pretend training is an answer to unemployment. But it is surely an important part for those who don't have full time jobs.

The answer again is commitment by government to raise minimum training standards and a payroll tax with government funded training programs for those who are not in the workplace as employees. Access to training should be provide both for those who work and those who do not. Training is not the only answer. Income protection is needed as well as a commitment to full employment.

With regards to education, skills and training, there are sectoral councils that are doing good work, but the labour movement favours a variety of approaches.

Non market based approaches are vital and necessary. The absence of government measures in the face of rapid technological change results in higher levels of unemployment. We prefer labour standards as minimum rights, as in the case for hours of work, health and safety, and minimum wage.

In the past the role of unions has been to take wages out of competition, forcing competition on other grounds, and that's still valid today. We cannot leave all decisions to market forces.

In an era of change, transition mechanisms are needed.

To me, mandatory employment impact statements are similar to environmental impact statements that accompany large economic activity.

One last point I want to make: competition around the world in the 'free' market is increasingly based on exploitation of workers. We should ensure that competition does not mean exploitation of child labour, forced labour, discrimination against women, the denial of freedom of association or the denial of free collective bargaining. Workers should have the right to join an association, form a union, and bargain collectively. Competing with workers that not only earn less, but also do not have any rights, is not fair. This is simply choosing the lowest common denominator to establish a future for workers and it is totally unacceptable."

> *Richard Cavanagh: National Director, External Relations*
> *Stentor Telecom Policy, Inc.*

I'm happy to be here today and pleased to be presenting a sketch of the business perspective of the future and the influence of the information highway on the workplace.

I'm going to present a few general comments about the issue from the business perspective: the impact on the business community of the information highway and workplace; talking about the actual process of labour itself as the places we work and the work we do change; a set of new changes in the way we actually form work; and the way we actually think about work.

An in talking about this, a little bit reminds me about changes in the industry right now. When we go out…in my capacity to external stakeholder groups and a number of government departments as well, what you hear is that the old rotary dial phone just doesn't exist any more. And whether people prefer that or a touch-tone, whether people are worse off now with their telephone service or better off, there is agreement that things have changed and will continue to change. What I see every day in the workforce with groups that I talk to are people from groups representing disabilities to senior citizen groups, to educators to health care providers, is that they are all caught up in this sleeper of technology, feeling that are they going to land on their feet everyday. So, we are caught up in a set of dramatic changes, no question that we are.

But I would like to think as well in some ways we are creators of our own destiny - right now in the midst of change I would like to think that we could harness this change eliminating or ameliorating the negative effects and enabling employers or employees to do what they like - realizing the full sweep of benefits of the information highway work their way into the lives of Canadians in a very wide comprehensive manner.

Now a number of folks around the table and those looking at the whole Information Highway Advisory Council process, I think, are dubious and quite correctly call into question what these benefits are, or perhaps more precisely who benefits from this, who stands to gain the most in terms of the information highway, and I'm not sure that around the table we have the same concept in mind of what the information highway actually is. It's a lot more than the Net, than the fibre optics; it's a lot more than broadband, it has to do with the way it injects itself into our everyday lives from the grocery counter that was at last night to the way I accessed the cable channels this morning.

There's a very wide concept that we are talking about here and I think it is necessary to land on a couple of common definitions and criteria as far as what we mean when we say "the information highway." It certainly transposed in a number of ways in terms of its definition in the four years or so that I've been working in telecommunications.

So far as whether the information highway is a destroyer or creator of jobs, or both in some instances: from a business perspective, the information highway is in and of itself looked upon as an enabler. Technologies, whether hard or soft, have enabled an array of new work arrangements such as telework, forms of self employment, contingent work. These kinds of work emerged from a number of enabling effects. IT assists those who are trying to balance their families and working lives. The information highway, again from a business perspective, and from the vantage point of the federal government itself, both raises the stakes of competition as Jean Claude said, and enables firms to become more competitive as well.

The information highway is a catalyst to think long and hard about work, labour programs in the workplace, in new and creative ways and our task must certainly - not alone, conjointly - be to harness the information technology to work for us, to work more plentifully, and with a more interesting variety of ways.

I think it would be facile just to refer to the information highway as an enabler only. It entails a great deal more, and if it is managed in a responsible manner - harnessing and deploying technologies in the workplace requires that employers and unions and governments all accept some level of responsibility in ensuring the benefits are widely realized and that the consequences - the negative consequences - are few. In a lot of ways, I think we can accomplish this in the way we have come to this Forum today, that is by avoiding sniping at each other and engaging in various endless circular debates that really get us nowhere, and by deciding to work together, whether that is through sectoral councils, which the business community is certainly behind as well, or more importantly, I would hope, through concrete events such as this one.

In my own industry, I do a lot of thinking about the whole question of polarization. Only I think about it in ways that are a little bit different now. The whole issue can certainly be addressed by a vary concrete agenda developed in unison by all those who have a stake in it to round it out. Certainly my own experience through the School Net program, through the community access program as well, government-driven, private sector driven, consumer driven exercises - these have worked really effectively so far as ways in which access to information and access to the information highway can be facilitated.

The key to overcoming the polarizing effects of the information highway and new technologies is education and training. It certainly must form a necessary component of applying new technologies in the workplace. The information highway will be wasted if we cannot develop and maintain the level of education and level of skill sets and levels of lifelong learning that's required to manage its rather formidable power.

How to do this? Well, as I mentioned, I think that all of us in here have a level of responsibility so far as appropriately managing the role of and the implementation of the information highway in the workplace. From this side, it is incumbent upon ourselves to first of all develop and maintain strong relationships with educators. And I think Nortel is well underway, as are a number of our colleagues in other sectors as well, in cultivating these relationships.

On the business side, we need to maintain the kind of environments that encourage our working people to develop certain skills sets, essentially offering incentives/opportunities, offer to make it easier, not harder, to go along - and harness - the flow of new technology as workers.

And finally, we need to work with government on policy measures to ensure the development of flexible standards and appropriate safety net protections. We certainly, from a business perspective, must ensure that government, as we quote Don Tapscott, "invest as a catalyst for creativity and not as an inhibitor to creativity."

In fact, government - and I think it is incumbent to look at existing models - and one very effective model which was driven by the Telecommunications Workers Union in British Columbia, and our own member company, BC Tel, developed in concert with a whole list of groups, the BC information highway accord, which has been very effective in ensuring that information highway services are first of all adequately managed in the workplace, and that services get to the more remote areas of the province, offering all kinds of opportunities to folks that normally wouldn't have those.

That kind of social contract, I think, is the direction that we are heading for, in both a national and international way, and it needs to be very seriously looked at, with government as the facilitator.

From the labour perspective as well, sectoral councils are very valuable for dialogue, and we are on the verge of setting one up in the telecom sector as well.

Just reflecting on my own industry perception, there is an awful lot of talk right now about the emerging competitive environment. The monopoly days are rapidly coming to an end, and as I continue to work in the area of universal access to new services, I am constantly challenged with ways of coming up with how to deliver new services and what those services should be; but bear in mind that the old model doesn't work anyway and implementing the information highway in the old monopoly model would be disastrous for Canadian competitiveness and global environment. Clearly, we are no longer in the post World War industrial model. We find ourselves immersed literally neck deep in the information highway.

What I would like to achieve from this session at the end of the day or two days, is that there are concrete plans to move forward; ultimately, I would hope that we end up with more questions that we can answer, since we are only now beginning to scrape the surface of what needs to be done."

Discussion of the Introductory Presentations

Santo Alborino, a business representative, agreed with Cavanagh that old models are out and that lifelong learning is the most important factor in moving forward. Experience has shown that, although legislation is important, "it does not cure all ills." What is more urgent is to prepare workers. He called for more learning and commitment from the three parties to help people adapt to changes.

Geoff Bickerton, a labour representative, commented on the frustration experienced by unions in this area: when unions negotiate good training guarantees, "these practices are branded as being uncompetitive." He gave the example of video encoding of the mail at Canada Post: "In Canada, it is one of the best jobs, with good working conditions. In the States, it is done by underpaid workers in terrible working conditions or, in some cases, it is done in Mexico." The business community sees the way it is done in Canada as uncompetitive. Alborino proposed financial institutions as an example that could be studied and emulated as they have a strong commitment to lifelong learning and see training as a solution.

Lars Olsberg commented that lifelong learning needed to be defined in order for participants to understand each other. "My grandfather, who left school very young, learned every day of his life, but this is not what we are talking about here," he observed.

Andrew Jackson, Canadian Labour Congress, stated that the human capital investment is crucial. However, training paradoxically compounds the polarization of work, as employers are not willing to invest in training temporary workers and only secure employees receive training.

Catherine Chandler-Crichlow, a business representative, spoke of the growing "unbundling of productivity, competitiveness and training." Developing the individual now seems the key driver, as opposed to competitiveness.

Shirley Seward commented on the important work done by sectoral councils in terms of training. Do labour and business bring the same priorities to these councils? Cavanagh said that, in the telecommunications field, nearly all the members of the sectoral council have agreed that the major unions must be represented at the council. He acknowledge the fact that setting differences aside is sometimes a challenge.

Research Base

At all Regional Fora, research presentations were made that would set the stage for discussions of workplace issues. At the Hull Forum, the research presented was of national scope, with the other Fora focusing on regional situations.

Jobs in the Knowledge-based Economy

Brenda Lafleur
Conference Board of Canada

Brenda Lafleur, Principal Research Associate for the Conference Board of Canada, presented on a two-phase study conducted by the Conference Board to examine the impact of information technology (IT) on employment. Phase I, completed one and a half years ago, provided an overview of the research. The second phase of the study looks at the issues identified in Phase I. It includes an industrial structure analysis, case studies and a future outlook.

The overall finding of the study, reported Lafleur, is that IT has not been a "job killer" -- on a macro level, there has been no net loss of jobs.

To define IT and its users, the study used Statistics Canada's "input-output" model and Industry Canada's standard industrial classifications. Lafleur noted that, to date, the study had been based on a rather narrow definition of IT, which excluded the information highway.

The real value of IT goods and services used by industries increased from $22 billion in 1986 to $48 billion by 1992 -- an increase of 116%. The use of non-IT goods and services increased by only 11% in the same period. IT-related purchases by industry increased by more than 80% over that period.

High IT Intensity industries are dominated by the service sector, with some manufacturing (e.g., electronics products, printing, transportation equipment), and some utilities included. Middle IT Intensity industries are also mainly services, with some manufacturing. Low IT Intensity industries are mainly manufacturing industries, and are all primary industries. The definitions for intensity levels take into account all IT goods and services, including those embedded within machinery.

Shirley-Ann George commented that this calculation may not accurately reflect IT use, since for example, the grain industry, which is seen as a low-IT industry, uses a significant amount of IT in certain components of its operation. Lafleur responded that the study looked not at the value of the wheat, but at the economics of the inputs used to produce it.

Lars Osberg asked Lafleur for a clearer definition of how the intensity levels had been defined. For example, petroleum refineries use a lot of technology, but are categorized here as low IT. Lafleur responded that, using the "input-output" model, the study looked at the products of IT producers and at the industries that purchased those products. Earlier studies had been restricted to the IT industry itself; they now look at the "users". The relative importance to the sector of its IT purchases, compared to its purchases as a whole, determines the definition of IT intensity.

Turning to employment figures by IT intensity, Lafleur reported that more jobs were created in high IT industries, and employment grew faster in industries growing in IT. The GDP went up to 24% for high IT industries, while middle and low IT industries stayed the same at 18% and 11% respectively.

Regarding job types based on "occupational" data (as opposed to industry "sector"), Lafleur reported that high IT industries saw a strong increase in management and clerical occupations. In middle IT industries, management occupations still increased, although on a smaller scale, but manufacturing jobs decreased dramatically. Low IT industries saw major losses in manufacturing and an increase in management.

Between 1985 and 1994, Statistics Canada conducted a survey of 12,000 workers to examine workers' perceptions of how IT affected their job security. While 20% reported that IT had a negative impact on job security, only 1% reported that they knew someone who had lost a job or retired because of IT. Although the survey question did not address those who had "dropped out" of the system or the impact of downsizing (which could be a result of IT), the responses reveal a discrepancy between people's perceptions of the impact of IT and the actual employment data. However, Lafleur noted, the fact that people perceive IT as a threat to job security is significant in itself.

Responding to a comment about productivity gains, Lafleur referred to the "productivity paradox", where there is a high investment in IT, but no real productivity gain. She cited an OECD study on productivity gains, which found that countries had underestimated the difficulty of harnessing the "enabling effect" -- for example, job training and organizational structures.

Lafleur turned to the case studies performed on the banking, pulp and paper, and wholesale trade industries. The study examines the kinds of IT used and the impacts on the workforce and on financial performance. It includes the perspectives of management, employees and unions.

The "future outlook" portion of the study will identify the characteristics of the future economy on a macro level and generate an outlook on the possible impact of IT. The final report will include both the case studies and future outlook.

"Impacts of the Information Highway on Employment and the Workplace"

Alex Turnbull, Partner
Goss Gilroy Inc.

Alex Turnbull told participants that his Report, "Impacts of the Information Highway on Employment and the Workplace," had been prepared for the Access and Social Impact Working Group of IHAC in May 1995 to investigate the potential impact of the information highway on employment and the workplace and to provide an analysis of selected socio-economic policy issues. "Of the study objectives, the first was to

investigate the potential impact of the Information Highway on employment and the workplace, specifically to provide an analysis of selected social economic policy issues including employment, education, training, work, organizations, industrial relations....The idea behind the study was to provide input to the formulation of future public policy on the development of the National Information Highway.

Turnbull used the term "creative destruction" to explain that IT both destroys and creates jobs, and that the jobs created may be in other industries, sectors or geographic locations – even other countries. "People are being displaced. People have to find new jobs. What I've noted here is that technology both destroys and creates jobs. This process is called creative destruction. That's one of the words that has been coined for the fact that jobs are created maybe in other industries, in other sectors and other geographic locations, and also in other countries. Some of the jobs migrate outside the country. Displaced workers find the need to reskill, relocate and/or change their career. Not everybody can make the transition. There's also a time lag between the job displacement and the job creation."

In the economy of the future, said Turnbull, the "routine producers" (e.g., data entry, assembly line, etc.) are an "endangered species". In-person services are growing, but precariously, and the "symbolic analysts", the professionals and problem-solvers, will be the "nouveau elite".

The globalization of the economy implies an advantage for developing countries, where wages are low, and stresses the need for continual skill and technological upgrading to maintain a competitive edge. Turnbull pointed to a graph depicting manufacturing labour costs across countries, noting the large disparity between cost per hour in Mexico and in the U.S.

In terms of training and education, IT requires new and broader skills, and includes a requirement for life-long learning. People need to "learn how to learn". Issues such as low-literacy and lack of basic competencies must be addressed.

In the area of work organization, flexibility will be key to responding to market conditions. There will be outsourcing, downsizing, rightsizing, re-engineering, de-layering, and offshoring. Working relationships are changing as well. Traditional employment (one employer, stability) is becoming a thing of the past, and there is a trend toward more part-time, contractual or temporary workers. Turnbull pointed to the difference between "core" and "peripheral" workers, noting that core workers are central to an organization's future and are well paid, with good career prospects and excellent benefits. By contrast, full-time peripheral workers (clerical, secretarial, less skilled) receive lower wages and experience higher turnover and few opportunities. At the lowest end of the scale are contingent peripheral workers (part-time, job share, or short-term contract arrangements), who are low paid and receive few or no benefits.

There is also an increased use of teleworkers and electronic surveillance.

IT has a major impact on employer-employee relations, according to Turnbull. It allows employers to change the balance from one of trust, co-operation and delegation of authority, with monitoring and accountability, to one in which traditional performance monitoring can be done more efficiently and monitoring can be applied to new areas. Some labour codes have provisions for technological change (British Columbia, Saskatchewan, Manitoba, and New Brunswick); however, outside collective bargaining, there is a role for employment standards to mitigate the effects of IT on the workforce. For example, worker mobility raises the issue of the portability and availability of benefits. Self-employed individuals often have no benefits or job protection.

In conclusion, Turnbull stated, "I think that the impacts of technology and the nature of work must be addressed. A framework that only highlights the commercial interest underestimates the consequence of change, and will have an enormous negative impact on our society in the long run. For the Information Highway to be accepted and supported by Canadians as a legitimate vehicle for social and economic change, there is a need to ensure that all levels of society will benefit."

The Report outlines "69 suggestions" that cover general issues, employment-related issues, education and training, and industrial relations.

Discussion of 'Research Base' Presentations

Shirley-Ann George asked Turnbull why he had assumed that the self-employed sector wants worker protection and benefits. Turnbull replied that the research indicated this to be the case. Garth White commented that the small business sector was surveying approximately 80,000 self-employed individuals and small businesses on the issue of insurance coverage. They found that many are not covered because coverage is not tax-deductible. "We have to analyze the problem," he said, "then work with industry to deliver. Don't enforce it." He also pointed to the rapidly changing nature of the use of IT in small business. Surveys that were conducted six months ago are no longer valid. He noted that the issues are different for small business and that those issues were not being addressed here.

Susan Jones commented on the need to define "self-employed", noting that there are self-employed garment workers who once worked in factories but are now forced to work at home. These workers, she said, would like to be protected. White replied that different contexts require different solutions.

Shirley Seward addressed Turnbull's statement about low-wage countries and their comparative advantage, saying that this is the only advantage these countries have. They must also cope with lower education, political instability and poor infrastructure. The best way to stay competitive is to use a high value-added, high technology, skilled approach.

David Stewart-Patterson noted that "we do best where our wages are highest." The larger companies generally have higher productivity, pay higher wages and invest more money into worker training. Turning to the issue of peripheral and core workers, he cautioned that a "one-answer policy" would not work.

Andrew Jackson replied that for the larger manufacturing companies, productivity gains are bound to IT and have involved job displacement. As for self-employment and labour standards, he said, the self-employed category is wide-ranging and must be defined. The key is to see if a dependent relationship exists between employer and employee.

Sonia Salah commented on the lack of gender analysis in the studies, stressing the need to develop skills among a greater number of women workers.

Robert Gillett noted the difficulty in anticipating what skills and training will be necessary to satisfy employers' future needs. He noted that Algonquin College meets with the high-tech industry but "they can't clearly define the skills they need." He added that compared to the U.S., investment in training is low in Canada's business community.

Geoff Bickerton commented on earlier statements that competition is not linked to wages but to skills, stating that unions are always told that wages are too high, and when they ask about training they meet with resistance. He addressed Lafleur on her survey question regarding job layoffs, suggesting that a more valid question would be "have you seen jobs disappear due to IT?".

Richard Cavanagh pointed out that the latest BC Tel collective agreement included a training and education package. The company also has an innovative agreement with Simon Fraser University to work hand in hand to address future requirements for skills.

Garth Whyte interjected at this point, cautioning that the group not "talk past each other," and pointing to the issues of plant closures, changes, transitions, large versus small business, and gender issues. "Government is trying to define its role here," he said. "I agree that employers need to become responsible," he added, "but you're bottling smoke." IT and its potential for growth may help communities and individuals working at home, he stated.

"We have the opportunity to create Canada as the best place to base a global business," commented Whyte. Canada's position for employment can be enhanced.

Jean-Claude Parrot told the group that the CLC would be addressing labour standards for contract workers this year. He reported that, from his perspective, many people who have lost their jobs and have gone out on their own are not "businesses" -- they are not covered under any protections. Industry must accept the fact that it has these "workers" and find a way to cover them. He added that in the global market, Canada is competing against countries such as Mexico that openly advertise their low wages and non-union environments. This must be addressed, he said, even though it goes beyond IT.

Case Study Presentations

At each Forum site, case studies were presented that looked at a particular sector, occupational group or situation where information technology had had a major impact. These case studies focused on what happened, how things worked and didn't work, and in many cases demonstrated successful partnerships between employees and employers.

Before introducing the first presenters, Lars Osberg emphasized that "we are talking about an optimal degree of organization of the market sector." What are the best rules? The discussion here is about regulations: labour and business need to find common ground. The case studies can provide many insights into the question.

Human relations are important, Osberg continued. He stressed the need for workers to be involved in the process, adding that "you can't treat labour as a disposable commodity."

Case 1: "Retraining Staff: Continuous Learning Within the Organization"

Nancy Leamen, Canadian Bankers Association and
Catherine Chandler-Crichlow, Toronto-Dominion Bank

Nancy Leamen, Director of Human Resources Policy at the Canadian Bankers Association told the group that the banking industry had undergone a major transformation as a result of to telecommunications technology. At the retail level, she said, customer demand has outstripped the industry's expectations. According to Leamen, the banks have experienced successful restructuring and transformation, which has included rewarding employees and providing them with the tools to make the transition.

The current workforce numbers about 209,000, 76% of whom are women. Part-time workers make up about 24% of the total. A gradual flattening has occurred in the workforce -- for example, teller positions have decreased by 13% since 1990. Middle management is up by 12.6%, and executive positions are down by 15%, largely through attrition. According to Leamen, many clerical jobs have been absorbed by middle management.

> *"The banks are also learning that to be successful in restructuring and transforming their organizations to meet the challenges of the information age, they must provide their employees with a support framework which includes tools, information and rewards to assist and empower them in managing change."*
>
> Nancy Leaman, Canadian Bankers Association

The banks offer assessments and training options to all employees facing job loss. Although the banks have always conducted worker training, the objectives of training and employee development have shifted to focus on broad job competencies, including analytical and problem-solving skills. This ensures long-term employability and employment security. Employees are encouraged to take responsibility for access to training opportunities. The industry investment in training and development was $260 million in 1995.

Catherine Chandler-Crichlow, Manager of the TD Bank's Education Centre, provided an overview of TD's continuous learning program.

The Bank, she explained, has responded to global and national competition by expanding its services to include asset management, funds, trusts, etc. This has involved a shift from static, strictly defined, transaction-based positions to dynamic, facilitative, relationship-based jobs driven by competencies and accountabilities. This shift requires employees to have a broad range of skills. The Bank's training principle is that it is the organization's responsibility to improve and support employees and to help them adjust to the impact of global shifts on the workplace.

The Bank's continuous learning philosophy looks at best practices (skill sets) demonstrated by successful employees, with the goal of empowering the overall workforce. Components of training include overall competency development, teamwork approaches, education on external programs and training on products and services. The focus has shifted from skills and knowledge only to include attributes such as attitudes, traits, motives and image. At this juncture in the technological transformation, explained Chandler-Crichlow, it is central that the organization provide employees with the skills to transfer their knowledge across any area.

Chandler-Crichlow stressed that training and development is employee-owned and - driven. The Bank provides the tools, the atmosphere and the culture for continuous learning. Management is accountable for communicating best practices throughout the organization.

The training paradigm has shifted from event-based to program-based training, and aims at developing competencies for "job families", using a tiered approach in which managers, supervisors, tellers, etc. all receive the same type of training.

The delivery has changed as well. Training is now around 50% technology-facilitated. This allows employees to better manage their training, ensures consistency, provides more equitable access, and accommodates diversity among learners. All training is sponsored by the Bank and conducted during working hours.

Case 2: "Telework in the Federal Public Service"

Susan Jones, Public Service Alliance of Canada

Susan Jones, Project Officer at the PSAC, presented the findings of a PSAC research project on telework in the federal public service. Jones reported that the overall finding of the study was that teleworkers were a "very dedicated" workforce committed to doing the work within what appeared at times to be unreasonable time demands.

Teleworkers work a longer, "split" day, have high-volume workloads, and often put in an extra 2.5 hours per day of their own time. The government is encouraging this type of working arrangement because it lowers overhead and results in increased productivity, said Jones. Workers find that the arrangement relieves them of the workplace stress caused by continual cuts and downsizing. Workers also perceive telework to be a way to learn new skills. However, Jones pointed out, often training is not employer-provided and workers are left on their own to learn the technology.

According to the survey, workers at the officer level experience greater self-sufficiency but are also taking on more secretarial tasks. In some federal offices, the infrastructure to support teleworkers is almost non-existent. Jones added that employers generally select technologies that will reduce staff costs and increase managerial control.

The downside to telework is the increasing work load and the isolation experienced by workers. Another issue is that work often intrudes into the home life of workers. The positive aspect of telework is that workers can avoid travel to the office.

Issues identified for improvement include health and safety, home office costs (workers generally must make do with what they have on hand), and training. Workers also feel they should be able to benefit from the increased productivity that telework achieves.

Jones stated that the union wants telework covered in the collective agreement, and that the following conditions should apply:

- Telework must be voluntary, and must not contravene any existing collective agreement.

- Telework must not exclude workers from pay equity plans.

- Telework should not be full-time.

- Payment should not be made on a piece-work basis.

- Adequate training should be employer-provided.

- The work hours should follow the same pattern as non-telework.

- Overtime should follow the collective agreement.

Jones noted that the trend toward working from home is growing -- by 2001, it is predicted that some 1.5 million people will work from their homes. An information highway search on telework brought up 5,085 documents. The PSAC's objective is to bring telework under the collective agreement.

Jones pointed to the federal government's blueprint on the information highway, specifically the focus on employee work time flexibility which would be required to be able to serve both sides of the country. Canadians, she said, will see fewer workers and encounter more technology. She stated her concern that workers will be expected to adapt to a "client-server" model -- if a worker is not replaced by a machine, she said, he/she will have to behave like one. Access is an issue as well, said Jones. There is a risk of marginalizing those who most need the services.

In conclusion, Jones offered several recommendations, including the creation of a Public Service Sector Council on the Advisory Committee. She stated that the new technology must not be used simply to reduce costs (by replacing workers), it should be used to improve service delivery. Finally, benefits such as shorter work weeks and job security should be provided to the workers.

Case 3: "Using New Technology to Benefit Postal Workers and the Public"
Kerry Pither and Geoff Bickerton, CUPW

Kerry Pither, Communications and Research Specialist with CUPW, presented an overview of a pilot project conducted by CUPW and Canada Post. In response to Canada Post's submission to use postal outlets as information highway onramps, the Union decided to conduct two test projects in St. Catherines and Niagara-on-the-Lake.

Each site had two computers installed for public access to the Internet or the local freenet. Currently, the cost is $3.50 per half hour; however, CUPW is pushing to reduce the cost to make access more available to low-income residents. Pither emphasized that the projects were designed to encourage job creation and skills development. Postal workers in each site were trained to be able to assist users, thus "empowering" the workers. Pither noted that the training went beyond simply the use of the technology to include the issues surrounding it.

The projects have been very successful and CUPW is trying now to extend the hours of availability. Pither stressed that the projects are "working with the existing infrastructure." The Union has recommended that if the project is implemented on a country-wide basis, it should be restricted to Canada Post outlets. This will help to keep community post offices open, and will improve access to government services in communities that have no other federal presence.

Pither stressed the importance of community involvement, especially the involvement of local freenets, in the project. "Expansion of services is crucial to CUPW," said Pither, adding that "it's how technology is used that creates the problem." Government must play a role in adjusting the technology to work for workers and the community. The goal, she said, is to preserve existing services and win back others. She added it will require more than a one-day workshop to address all these issues.

Office of the Minister of Labour   Cabinet du ministre du Travail

news release
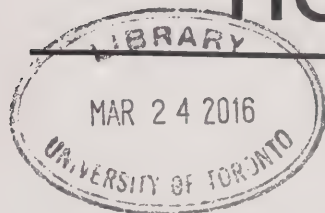
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FOR IMMEDIATE RELEASE

97-39

Labour Minister releases Report of the Forum on the Information Highway

OTTAWA... "The Information Highway is rapidly changing the way we work and Canada needs a vision which will allow us to successfully meet the demands of the new workplace," says Canada's Labour Minister, Lawrence MacAulay. "The impact of information technology has created challenges and opportunities for both workers and workplaces. These challenges and opportunities demand new skills and different types of work arrangements," he said. "We have to identify different approaches for addressing workplace change in order to improve the adaptability of workers, to ensure worker protection, and to minimize the negative impacts on families," said the Minister.

In response to this challenge, the Minister of Labour today released the final report of the **National Forum on the Information Highway**.

The National Forum was sponsored by the Advisory Committee on the Changing Workplace, and chaired by the former Minister of Labour, the Honourable Alfonso Gagliano. The aim of the Collective Reflection on the Changing Workplace Advisory Committee was to examine issues arising from workplace change.

The National Forum on the Information Highway and Workplace Issues was part of the Federal Government's response to the recommendations made in the Information Highway Advisory Council's Report and Minority Report. Recommendations included convening a national forum to "examine the challenges and opportunities presented by the Information Highway with respect to the workplace1," and to ensure that issues such as impact on employment, skills and training, and labour standards received wide public discussion.

The report represents a synthesis of the six regional fora reports, including case studies, research presentations, and a video conference summary.

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1 Page 21. Government of Canada. Building the Information Society: Moving Canada into the 21st Century. Referring to issues raised in both the IHAC and Minority Reports, the text notes: "In order to ensure that these issues receive wide public discussion, they (Government of Canada) will **convene a national forum** with involvement by the Canadian Labour movement.

Canadä

National and regional planning committees developed the Forum themes, identified case studies and research to be presented, and participants to be invited. At each regional planning committee, organized labour and business representatives worked in partnership with HRDC to ensure equal numbers of participants from union and business sectors, as well as identify participants from levels of government, education, and nonprofit organizations. In this way, the agenda of each Regional Forum was based on regional needs, and regional perspectives became part of the national approach to addressing workplace change.

National Forum Results

This National Report is comprised of all regional fora reports plus the Day Two Video Conference summary. Each regional forum report summarizes the case studies and research presentations made. The National Forum Report will also be available on the Collective Reflection Web Site, the HRDC Labour Web Site, and the Industry Canada Web Site.

Although it was not the purpose of the National Forum to make recommendations, several common themes emerged:

- There is no universal solution for addressing workplace change: what can positively affect one group, can negatively affect another. Government can facilitate partnerships between business and organized labour to find solutions that reduce negative impacts.
- There is need for a national vision to stimulate the development of information technology, and to measure the impacts of technology on the workplace.
- Participants were concerned about the impacts of information technology on society: on families, communities, and on workplaces.
- Health, safety and security must be a consideration, especially for those who work at home or in nonstandard situations. It was noted that the Canada Labour Code does not address the impacts of information technology.
- Unions and businesses support the training and education of workers to preserve jobs, and to improve the adaptability of workers.

The main purpose of the National Forum was to create a venue that encouraged the sharing of different perspectives. What follows is just that - the compilation of different regional perspectives, different voices, and frank discussion that was balanced by the desire to find solutions of mutual benefit.

A summary version of the National Forum Report can be found in Appendix A of the **Report of the Advisory Committee on the Changing Workplace** as part of their work for the Collective Reflection. In addition, the National Forum Report can be found on the web sites of the Collective Reflection at http://www.reflection.gc.ca, and Industry Canada at http://info.ic.gc.ca.

NATIONAL FORUM ON THE INFORMATION HIGHWAY AND WORKPLACE ISSUES: *Challenges and Opportunities*

"The new industries that spring up around the Information Highway will generate many thousands of new jobs in Canada. They will also demand new kinds of skills and different types of work arrangements. Inevitably, there will be job losses in some areas and job gains in others."
> - "Building the Information Highway: Moving Canada into the 21st Century"

One of the Federal Government's responses to the recommendations raised in the Information Highway Advisory Council's (IHAC) <u>Report</u> and <u>Minority Report</u>, was to convene a national forum to, "examine the challenges and opportunities presented by the Information Highway with respect to the workplace," and to ensure that such issues as impact on employment, skills and training, and labour standards receive wide public discussion.2

The Collective Reflection on the Changing Workplace, is a vision exercise initiated in August 1996 by the former Minister of Labour, Alfonso Gagliano, to examine the changing workplace and explore the issues arising from workplace change. One of the initiatives undertaken by the Collective Reflection, was to convene the National Forum on the Information Highway and Workplace Issues, in collaboration with national organized labour and business representatives.

The National Forum was held February 21st and 22nd, 1997 in six different sites across Canada: Moncton, Montreal, Toronto, Calgary, Vancouver, and Hull (national site). For Day Two of the National Forum, all sites were connected, using video conference technology, to permit discussion and information exchange. It is estimated that approximately 200 invited participants attended the National Forum.

National and Regional Input

A national planning committee identified the three key topics for discussion at all Forum sites:

- the impact of the information highway on the workplace (current information and research, implications for skills development, impact on jobs, etc.),
- new approaches to work that utilize information technology (case studies),
- working to ensure worker protection.

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2 Page 21. Government of Canada. <u>Building the Information Society: Moving Canada into the 21st Century</u>. Referring to issues raised in both the IHAC and Minority Reports, the text notes: "In order to ensure that these issues receive wide public discussion, they [Government of Canada] will **convene a national forum** with involvement by the Canadian labour movement.

"I wish to express my appreciation to Mr. Gagliano for sponsoring the National Forum. The emerging issues identified by the participants will go a long way in helping us understand the impact changing technology is having on the workplace," concluded the Minister.

To obtain copies of the National Forum Report, contact the Public Enquiries Centre of Human Resources Development Canada -- fax number: (819) 953-7260.   The report is also available on the Collective Reflection Web Site at http://www.reflection.gc.ca; the Human Resources Development Canada, Labour Program Web Site at http://labour-travail.hrdc-drhc.gc.ca, and the Industry Canada Web Site at http://info.ic.gc.ca

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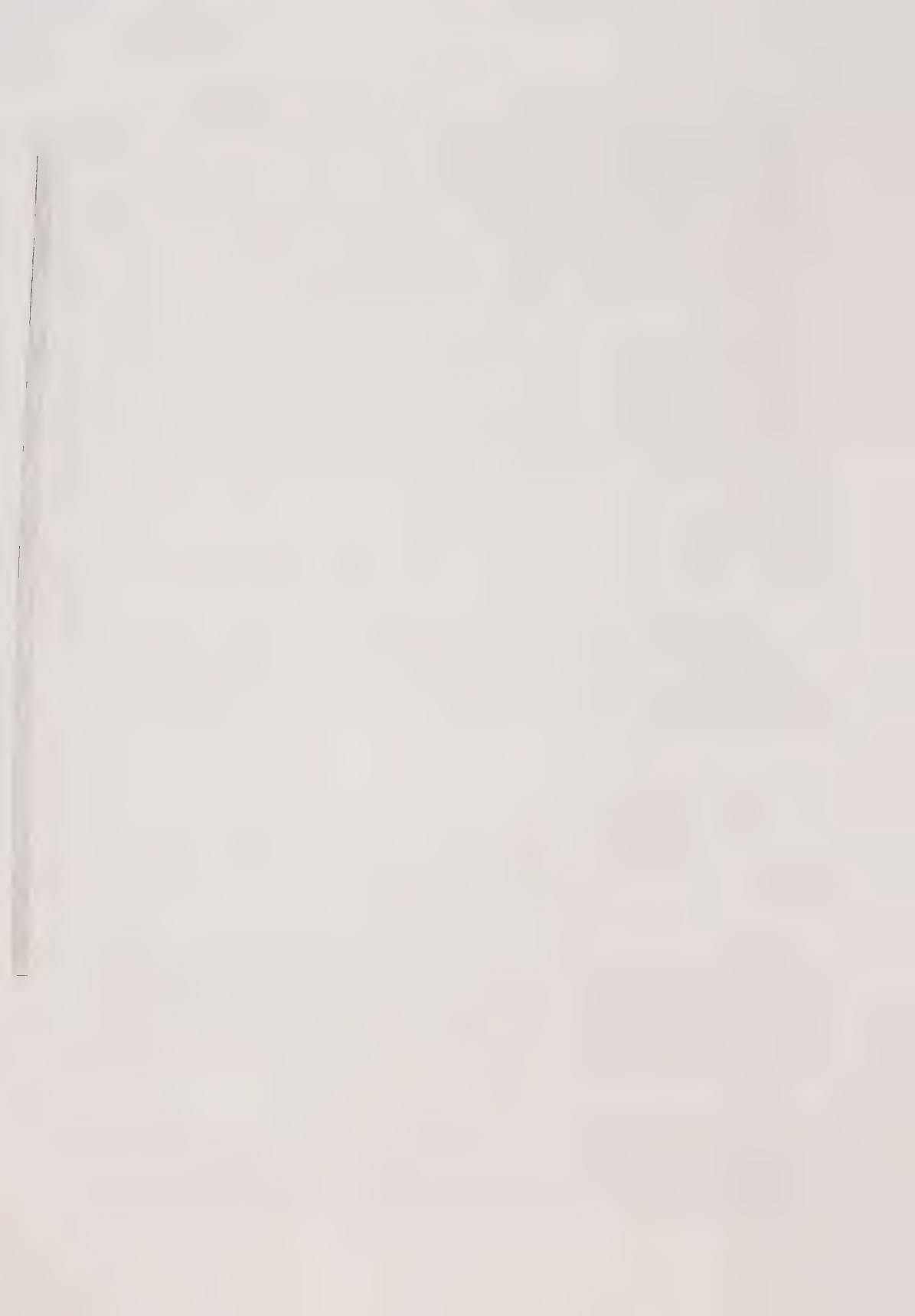
Le principal objectif du Forum national était d'établir un moyen pour favoriser l'échange de points de vue divers. Et c'est ce qui se passe puisqu'on a recueilli les opinions des régions, que différentes voix se sont fait entendre et qu'il y a eu une discussion franche guidée par le désir de trouver des solutions mutuellement avantageuses.

- Un résumé du rapport sur le Forum national se trouve à l'appendice A du **Rapport du Comité consultatif sur le milieu de travail en évolution,** qui a contribué à la Réflexion collective. En outre, le rapport sur le Forum peut être consulté au site Web de la Réflexion collective, à l'adresse http://www.reflexion.gc.ca, et au site d'Industrie Canada, dont http://info.ic.gc.ca.

- l'impact de l'autoroute de l'information sur le milieu de travail (information et recherches actuelles, répercussions sur le perfectionnement des compétences et l'emploi, etc.);
- les nouvelles méthodes de travail faisant appel à la technologie de l'information (études de cas);
- les mesures à prendre pour assurer la protection des travailleurs.

Les comités de planification national et régionaux ont choisi les thèmes du Forum et déterminé les études de cas et les exposés de recherche qui seraient présentés et les participants qui seraient invités. Dans le cadre des travaux de chaque comité régional, des représentants syndicaux et patronaux ont collaboré avec les fonctionnaires de DRHC pour faire en sorte qu'il y ait un nombre égal de participants provenant des syndicats et des entreprises; en outre, ils ont constitué la liste des participants représentant les gouvernements, le milieu de l'enseignement et les organisations sans but lucratif. Ainsi, l'ordre du jour de chaque forum régional reflétait les besoins régionaux, et les points de vue des régions ont été incorporés dans la démarche nationale adoptée face à l'évolution du milieu de travail.

Résultats du Forum national

Le rapport national contient les rapports de tous les forums régionaux ainsi que le sommaire de la vidéoconférence du deuxième jour. Chacun des rapports régionaux résume les études de cas et les exposés de recherche présentés. Le rapport concernant le Forum national pourra être consulté aux sites Web de la Réflexion collective, du Programme du travail (DRHC) et d'Industrie Canada.

Même si le Forum national n'avait pas pour objet de formuler des recommandations, il a permis de dégager plusieurs grands thèmes communs :

- Il n'existe pas de moyen universel pour faire face à l'évolution du milieu de travail : ce qui peut avoir un effet positif sur un groupe peut être négatif pour un autre. Le gouvernement peut aider les entreprises et les syndicats à établir des partenariats afin de trouver des moyens de réduire les effets négatifs.
- Il est nécessaire d'établir une vision nationale pour stimuler le développement de la technologie de l'information et pour mesurer l'incidence de la technologie sur le milieu de travail.
- Les participants s'inquiètent des répercussions de la technologie de l'information sur la société, c'est-à-dire sur la famille, la collectivité et le milieu de travail.
- Il faut tenir compte des questions de santé et de sécurité, particulièrement en ce qui concerne les personnes travaillant à domicile ou exerçant un emploi atypique. Les participants ont mentionné que le *Code canadien du travail* ne traite pas des répercussions de la technologie de l'information.
- Les syndicats et les entreprises favorisent la formation et l'éducation des travailleurs afin de préserver les emplois et d'accroître l'adaptabilité des travailleurs.

FORUM NATIONAL SUR L'AUTOROUTE DE L'INFORMATION ET LES QUESTIONS RELATIVES AU MILIEU DE TRAVAIL : Défis et possibilités

« Les industries auxquelles donnera naissance l'autoroute de l'information créeront des milliers d'emplois au Canada. Elles feront également appel à de nouvelles compétences et à divers régimes de travail. Inévitablement, il y aura des pertes d'emplois dans certains domaines et des gains d'emplois dans d'autres. »

- « La société canadienne à l'ère de l'information : Pour entrer de plain-pied dans le XXIe siècle »

L'une des réponses du gouvernement fédéral au Rapport final du Comité consultatif sur l'autoroute de l'information (CCAI) et au rapport minoritaire a consisté à organiser un forum national en vue d'examiner « les défis et les occasions propres à l'autoroute de l'information en ce qui a trait au milieu de travail » et de veiller à ce que les questions telles que les répercussions sur l'emploi, les compétences, la formation et les normes du travail fassent l'objet d'une vaste discussion2.

La Réflexion collective sur le milieu de travail en évolution, qui vise à tracer un portrait de l'avenir, a été amorcée en août 1996 par l'ancien ministre du Travail, M. Alfonso Gagliano, dans le but d'examiner l'évolution du milieu de travail et les questions qui s'y rattachent. L'une des initiatives prises dans le cadre de la Réflexion collective a été l'organisation du Forum national sur l'autoroute de l'information et les questions relatives au milieu de travail, en collaboration avec des représentants d'entreprises et de syndicats nationaux.

Le Forum a eu lieu les 21 et 22 février 1997 dans six sites différents du Canada, soit Moncton, Montréal, Toronto, Calgary, Vancouver et Hull (site national). Le deuxième jour, tous les sites ont été reliés par vidéoconférence, afin de permettre une discussion et l'échange d'informations. On évalue à environ 200 le nombre de participants au Forum.

Contributions nationales et régionales

Un comité de planification national a établi trois grands thèmes qui devaient être discutés dans tous les forums :

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2 Gouvernement du Canada. *La société canadienne à l'ère de l'information : Pour entrer de plain-pied dans le XXIe siècle*, page 23. Au sujet des questions soulevées dans le rapport du CCAI et dans le rapport minoritaire, le gouvernement indique ce qui suit : « Pour ouvrir ces diverses questions à un vaste débat public, ils [gouvernement du Canada] convoqueront un forum national, où l'on attend une importante participation du mouvement syndical canadien. »

« Je tiens à remercier M. Gagliano d'avoir organisé le Forum national. Les questions cernées par les participants nous aideront sans aucun doute à mieux comprendre les répercussions qu'a l'évolution de la technologie sur le milieu de travail », a conclu le Ministre.

Il est possible de se procurer le rapport concernant le Forum national auprès du Centre de renseignements de Développement des ressources humaines Canada en envoyant une demande par télécopieur au (819) 953-7260. Il est aussi possible de consulter le rapport aux sites Web de la Réflexion collective au http://www.reflection.gc.ca, de Développement des ressources humaines Canada, programme du Travail au http://labour-travail.hrdc-drhc.gc.ca, et d'Industrie Canada au http://info.ic.gc.ca.

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communiqué

Le ministre du Travail rend public le rapport concernant le Forum national sur l'autoroute de l'information

OTTAWA.... « L'autoroute de l'information transforme rapidement la façon dont le travail est effectué. Par conséquent, le Canada doit tracer un portrait de l'avenir afin de pouvoir s'adapter aux nouvelles exigences du milieu de travail », a déclaré le ministre du Travail du Canada, Lawrence MacAulay. « Les répercussions de la technologie de l'information ont suscité de nouveaux défis et créé de nouvelles possibilités tant pour les travailleurs que pour lieux de travail. Ces défis et possibilités commandent de nouvelles compétences et diverses formules de travail », a dit le Ministre. « Il nous faut donc trouver des moyens pour accroître l'adaptabilité des travailleurs, assurer leur protection, et réduire au minimum les effets négatifs de l'évolution du milieu de travail sur les familles », a déclaré le Ministre.

C'est dans cette optique que le ministre du Travail a rendu public le rapport final concernant le **Forum national sur l'autoroute de l'information.**

Ce forum a été organisé par le Comité consultatif sur le milieu de travail en évolution et présidé par l'ancien ministre du Travail, M. Alfonso Gagliano. Les activités du Comité consultatif de la Réflexion collective sur le milieu de travail en évolution avaient pour objet d'examiner l'évolution du milieu de travail et les questions qui s'y rattachent.

Le Forum national sur l'autoroute de l'information constitue l'une des réponses du gouvernement fédéral aux recommandations du Rapport final du Comité consultatif sur l'autoroute de l'information (CCAI) et du rapport minoritaire. Il visait plus précisément à examiner « les défis et les occasions propres à l'autoroute de l'information en ce qui a trait au milieu de travail[1] » et de veiller à ce que les questions telles que les répercussions sur l'emploi, les compétences, la formation et les normes du travail fassent l'objet d'une vaste discussion.

Le Rapport fait la synthèse des rapports des six forums régionaux, notamment des études de cas, des exposés de recherche qui y ont été présentés, et un sommaire de la vidéoconférence.

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1 Gouvernement du Canada. *La société canadienne à l'ère de l'information : Pour entrer de plain-pied dans le XXIe siècle*, page 23. Au sujet des questions soulevées dans le rapport du CCAI et dans le rapport minoritaire, le gouvernement indique ce qui suit : « Pour ouvrir ces diverses questions à un vaste débat public, ils (gouvernement du Canada) convoqueront un forum national, où l'on attend une importante participation du mouvement syndical canadien. »

Canada

Case 4: "Canadian Grocery Producers Council (CGPC): A Joint Business-Labour Approach to Human Resource Planning"

Janet Dassinger, Director, Training Programs and Policies,
National Training Fund, United Food and Commercial Workers
Union (UFCWU)

Janet Dassinger (UFCWU), speaking as a trade unionist, began her presentation by describing the environment that her union found itself in, and the state of the industry which led to the UFCWU's decision to pursue this initiative of "jointness".

For the last ten to twelve years, the union found itself having to cope with economic restructuring, technological change and work reorganization, with an impact on workers that included job loss, job fear, and skills gaps. "In terms of what the industry looks like though, we have experienced over 16% decline in employment levels in recent years, it is still a very large sector of the economy. There's over 200,000 people employed in the sector."

Dassinger explained that the workers represented by the UFCWU are retail food store workers and retail food producers, as well as, just recently, workers at a Tim Horton's restaurant in Timmins, Ontario. These workers have lost jobs and found themselves with an increasing skills gap compared to workers in other manufacturing sectors. Relative to all manufacturing workers UFCWU members are younger and include a slightly larger number of women. Their high school completion rate is 46%, while the rate for all manufacturing workers is 41% and the national average is 32%. In 1993, results and records from a study by the Canadian Labour Market and Productivity Centre confirmed that in this sector employment levels were declining, the percentage of older workers was increasing, literacy levels were lower than average, and very little training was being provided.

> *"...We think that by acting we can demonstrate that unions are central to successful training initiatives, and that unions should be respected as authorities on training and on public policy with regard to training."*
>
> Janet Dassinger, United Food and Commercial Workers International Union

In spite of reduced funding, the UFCWU was able to respond to industry challenges through progressive organizing. The industry challenges the union had to face were caused by the Canada-U.S. Free Trade Agreement, new retail formats, premium private label products, rising exports, and differences in supply-managed input product costs. UFCWU members faced the threats of devolution, an attack on the labour market program, and increased labour/management tension. It was incumbent upon the UFCWU as a labour organization to address the particular concerns of their industry and to take advantage of the possible opportunities presented by the public policy environment towards 1) a shared commitment to good labour market policy and negotiated agreements; and 2) social bargaining.

Workers represented by the UFCWU identified their need for training in areas arising mainly from the production process. These included:

- Employment health and safety, including ergonomics;
- Basic literacy and numeracy;
- Technical training for new equipment and processes;
- Computers and automated process control skills;
- Soft skills such as team playing, communication and problem solving;
- Training to support quality initiatives such as quality control and statistical process control.

Middle and senior management wanted to see the development of:

- Coaching, team building and communication skills;
- Joint problem solving and dispute resolution skills;
- Skills to deal with employee diversity;
- Abilities in integrating human resource planning with overall business planning;
- Training in strategic planning and domestic and export marketing.

The Canadian Grocery Producers Council

Labour and management began discussions in 1991 on the basis of their mutual concerns. The Canadian Grocery Producers Council (CGPC) was born out of a common sense of insecurity. Initially the discussions, between only the top representatives of labour (United Food and Commercial Workers International Union) and management (Grocery Products Manufacturers of Canada), were wide-ranging and did not focus on human resources.

This joint initiative required a mental shift on both sides. For instance, they found that they could agree on the matter of competitiveness. The union is not opposed to competitiveness as long as it translates to employment. The UFCWU supports "Sustainable Prosperity" -- that is, competitiveness and employment growth.

In the past, there have been a number of training initiatives and many negotiated agreements. Early initiatives included training centres, a layoff and closure program, and a basic skills program. The union already had a well-defined training approach before it got involved in the CGPC. Explaining why the union has embraced joint training programs, Dassinger said that co-operation provides the benefits of:

- Recognition of skills learned;
- The addition of relevance to the training;
- The possibility of increased private and public financing.

The following Mission and Mandate/Strategic Objectives were agreed upon in the joint labour/management discussions:

CGPC Mission

- To increase the level of education and training in the grocery products manufacturing industry through the delivery of efficient and high quality training programs and services.

- To communicate the value of training and human resource development and their linkage to sustainable prosperity. The value of training will be ongoing with measurable results.

CGPC Mandate and Strategic Objectives

- Identify industry-wide training needs and provide programs and services based on the needs of all members.

- Foster joint co-operative approaches to training for the industry.

- Create efficiencies in training.

- Recommend industry-wide standards of training for the industry.

Impact of the CGPC

Workers were skeptical at first, believing that training was not accessible to them. At the production level in particular, there was a lack of a "training culture". But people became more attuned to it, starting with computer training to give themselves foundation skills and to demystify the technology. They began to accept the notion of sustainable prosperity. Yet, they witnessed over a dozen plant closures.

The union considered it very important to have its own perspective on training before contacting the employer. It has different goals than the employer. For instance, it cannot agree with the "creaming" of higher-skilled older workers with younger workers. Yet, it can agree with the employer on things such as job performance. Participating in dealing with such matters is consistent with the union's own goals.

CGPC: Key Result Areas

- Basic/foundation skills programs;
- Adjustment;
- Tools and services (e.g., joint committees);
- Information provision;
- Sectoral funding;
- Occupational skills;
- Industry standards;
- Communication;
- Advocacy;
- Self-sufficiency.

Conclusion

For all its advantages, Dassinger said, "jointness" poses for the union the challenges of:

- Developing and maintaining a union agenda with respect to training;
- Properly training and preparing its representatives;
- Building commitment within its leadership and "rank & file" membership.

The UFCWU will continue a union-only approach, said Dassinger. "On the policy front, we think that by acting we can demonstrate that unions are central to successful training initiatives, and that unions should be respected as authorities on training and on public policy with regard to training. Our success at joint ventures, I think, will always be routed in our ability to have a union-only approach that makes us continually question what our goals for training are, and why we are at that table in the first place."

Discussion of Case Studies

Geoff Bickerton of the Canadian Union of Postal Workers (CUPW) responded to a question about how his union would go about convincing a corporation to take part in a such an initiative such as Case Study Three. He explained that the number of years of job security depended on the useful work available for Canada Post's employees. With the exception of the training process, the project has to pay for itself.

Canadian Federation of Independent Business representative Garth Whyte stated that technology should not be blamed for problems experienced by the workforce. Today, applications of technology should be examined: how can this technology be used? Each community has a website; technology is a binding force. For unions and small business, the Internet is a great equalizer. It has a global impact, but it is community-based as well. "How do we facilitate this?" he asked.

Paul Swinwood of the Software Human Resource Council said it was a question of *how* to impact the implementation of technology, not of stopping it from being implemented.

Kerry Pither of the Canadian Union of Public Employees agreed that the implementation of technology was not going to stop, but noted: "we've got to stop and think about it before it is implemented."

Garth Whyte responded to Pither's remarks, stating that: "as soon as you empower people, you do not know what will happen." He explained that it is a process of getting people involved, and that it is impossible to put a barrier on technology.

"I did hear 'slowing down'," said Santo Alborino of the Bank of Montreal. Empowering people is what life-long learning is all about, he stated. The ability to challenge people so they can learn and adapt to changing technology is key.

Geoff Bickerton replied that "we have to have a concept of access beyond physical local points." He explained that in Canada there is access to the telephone and the post office, but people do not feel that they have access to the Internet, even though they can walk by the "machines" required for such access. We have to have an education strategy and a criteria for success as well.

Janet Dassanger of the United Food and Commercial Workers Union added that another dimension around access could be revealed from the joint union/management approach she had just described in Case Study Four. There are deeply held assumptions, she said, depending on where you are: for example, it was a real surprise to employers that there was so much illiteracy. In her experience, a joint training approach is much more relevant than rushing in with laptops.

Chair Lars Osberg responded to Dassanger's comment that there was only one and a half days to discuss these issues by noting that they had come a long way in terms of finding common ground. There is a lot of technological change, he said, but basically humans have not really changed that much over the decades.

"Challenges Presented by the Information Highway"

Chair: Serge Brault
Panel: Jean-Claude Parrot and Richard Cavanagh

In concluding the Hull Forum, Jean Claude Parrot and Richard Cavanagh presented a wrap up of the day's discussions.

Richard Cavanagh

One conclusion from the discussion so far, said Richard Cavanagh, is that "one day and a half doesn't cut it."

Cavanagh noted the shift in consideration with respect to information technology to that of its impact, such as the different confines of access as it involves public space. Clearly, the relationship with information technology is what must be addressed, he said, as well as what "universal access" and "information society" really mean.

For Cavanagh, the absolute key is literacy: "We're nowhere if not a literate society." Many people are disengaged simply because they do not have skills. There is a knowledge gap. A lot of material and data is not adequate. New and creative ways of approaching these issues jointly should be considered by employers and unions and put into collective bargaining. Processes and industrial relations programs which seem to work effectively are arrived at through a joint process.

The government has a role as a facilitator in the following areas:

- In the area of literacy, through the work of the National Literacy Secretariat of the Department of Human Resources and Development Canada;
- For access to technology, through the Community Access Program of School.Net;
- Through the Canadian Union of Public Employees' urban initiative -- an example of where Industry Canada's Community Access Program (CAP) should be.
- Through the Canadian Radio-television and Telecommunications Commission (CRTC), which, by mid-year, will begin to look at a full range of access issues.

On the broader issue of access, Cavanagh concluded, the government has a component role. Information technology does not exist in a vacuum and a human agency does need to prevail here. The development and application of human capital is most important.

Jean-Claude Parrot

The Information Highway is part of something greater that is taking place, according to Jean-Claude Parrot. He stressed that the issues of employment and job creation cannot be ignored. A job creation strategy must be developed. Because the Information Highway Advisory Council (IHAC) did not take this issue seriously, he presented a dissenting report. There are already recommendations in the IHAC report that learning and training must be a part of whatever is done on the Information Highway.

But, Parrot continued, in discussions of access what must be considered is that more and more people are being denied access to services. Post offices are being closed. A bus to Northern Ontario is available only at night. Cuts have been made to the CBC. Postal workers suggested ways of using post offices in rural areas for additional services while the infrastructure was there -- but they were told no. "If we want to talk about access, we have to be serious."

There are those who say that the "free market" will solve it all, and who want to eliminate effective unions, commented Parrot. He expressed dismay that labour is considered by some as an "interest group". And while he in turn is not a fan of the business community, he said he believes that labour has to work with them. Labour and business have to find ways to respect each other, though they do not necessarily have the same interests.

Also included in his minority report, Parrot said, is the need to consider ways of protecting workers (e.g., worksharing, reduced working time, greater flexibility, pension portability, and removal of barriers). The role of the union is to protect its members, though not always from a confrontational point of view. "We can do a lot together if we want to." But Parrot cautioned that labour and business cannot work together if one thing is promoted and then the opposite thing is done.

Final Comments and Discussion

Shirley-Anne George of the Canadian Advanced Technology Association asked, assuming that workers need a shorter work week and that this is undesirable for employers, how a compromise could be achieved that meets labour's needs without undermining those of employers?

Jean-Claude Parrot replied: "Workers understand what is possible and what is not. I have faith in workers." George explained that there are non-union workers who will work any number of hours in the three days before a software release. Parrot referred to the recommendations made on this issue in a recent study involving both labour and business representatives.

Garth White (Canadian Federation of Independent Business) commented that there is an inherent assumption that "union is better", whereas survey after survey, including a recent one by Angus Reid, has shown that "good things come in small packages." In a 1996 World Bank study of employees, small workplaces were rated better. White expressed more enthusiasm for the group's discussion of issues such as how employees can be helped generally in adapting to the changing economy. For example, employees do not see the need to use the Internet -- that is an issue.

With respect to the issue of research, David Stewart-Patterson, of the Business Council on National Issues, said that it is not known what approach will work best. It is important not just to try new ideas but to consciously evaluate things. For Canada Post, does the new idea increase mail? For the bank, does it create profit for shareholders? Measures designed to protect one group can hurt others. Stewart-Patterson said he hoped that the Canada Post project does not interfere with the government program in which students help local business onto the net. One size does not fit all. "It is a question of attitude," Stewart-Patterson said: "We need to maintain a positive approach." Government should be a facilitator, not a regulator. It is essential to keep creating jobs.

Shirley Seward of the Canadian Market and Productivity Centre (CMPC) noted that in Canada there are many examples of situations in which parties have sat down and negotiated in good faith. The CMPC has found that the best arrangements result from labour and management sitting down together. The CMPC report on this will come out in the spring.

Jean-Claude Parrot explained that this is not an issue of the unions getting additional membership, but noted that the idea that unionization is not "good for business" interferes with the work of unions. Unions must look at how they protect jobs. On the issue raised by Stewart-Patterson, he said that the Post Office project was not intended to stop others from having Internet access.

The federal government, said Geoff Bickerton of the Canadian Union of Public Employees, has to acknowledge the right to address information technology issues though collective bargaining.

Santo Alborino of the Bank of Montreal commented that there is a problem with saying that collective bargaining is the only way for employees to face employers: it requires employees to join unions. There are different ways of doing things, and the right of employees to choose whether or not to join a union should be respected.

Regarding the growth of non-standard work (contract work, temporary work, telework), Andrew Jackson of the Canadian Labour Congress noted that current employment standards legislation does not really apply with these workers. Employment standards legislation, basic standards and protections are absent. He cautioned that "there is an enormous potential for abuse in these situations."

Karen Jackson added that government needs to ask if its tax policies, health care policies and education systems are lined up properly to deal with the trend toward non-standard work. She gave as an example the case of engineering graduates, who at one time were employed immediately, but now need additional skills such as the ability to bid for tenders.

"The list of what we don't know far exceeds what we do," commented Richard Cavanagh. Any development needs to be sufficiently flexible. In his view, there is no flexibility in the International Labour Organization (ILO) determinations on homework. Government, he said, should not have a role "until the end of the day."

Catherine Chandler-Crichlow of the Toronto Dominion Bank, noted that some concepts were not being defined clearly -- such as "workplace", "life long learning", and "the Information Highway".

Kerry Pither of the Canadian Union of Postal Workers said that essential/basic needs should be considered as opposed to optional needs. Before putting computers in schools it is important to consider first the fact that we cannot afford teachers or books in those schools.

Robert Gillett of Algonquin College commented that "downsizing" and "information technology" are not necessarily synonymous: information technology did not create the downsizing itself.

Garth Whyte stated that people recognize Canada as one of the leaders in information technology: there must be some reason for this, and some advantages that can be agreed upon.

Janet Dassinger of the United Food and Commercial Workers Union said that much can be learned through joint mechanisms, when both parties are clearly aware of their objectives.

Nicole Senécal, Human Resources and Development Canada, Labour, added that though there may be different focusses, "we are all human beings, with common goals."

Chair Serge Brault concluded the discussion by noting that a very strong view had been expressed regarding the need for an ongoing venue to address issues such as those raised at this meeting. He acknowledged a consensus that it is worthwhile to bring people together to discuss and develop common solutions and help the government develop user-friendly interventions.

As each Forum site chair would present a summary of their days' discussions, Serge Brault gave participants an overview of the report he would present during the video conference and asked for their comments. Overall, his report was well received and a few suggestions were made for additions. These included:

- The need for a gender-based analysis in all studies and reports;

- The importance of stressing the opportunities presented by IT;

- The need for a 100% accessibility goal for IT to be a positive phenomenon;

- The need to "stop admiring the problem and do something about it";

- The fact that everyone must take some responsibility for IT to be managed adequately;

- The importance of the high unemployment context.

- The emerging focus on joint approaches, sectoral councils, involvement of all stakeholders. The budding energy seen at this Forum should be capitalized on -- however, issues and impacts on workers must not be pushed aside in the meantime.

Participants

Monsieur Serge Brault
Member
Advisory Committee on the Changing
Workplace

Monsieur Jean-Claude Parrot
Vice-president executif
Congres travail au Canada

Mr. Murray Randall
Executive Assistant to the President
Canadian Labour Congress

Mr. Geoff Bickerton
Director, Research
Canadian Union of Postal Workers

Mr. James Kinkaid
National Representative
Communications, Energy and Paper
Workers Union of Canada

Mr. Richard Cavanagh
National Director
External Relations
Stentor Telecom Policy Inc.

Ms. Nancy Leamen
Director
Human Resources Policy
Canadian Bankers Association

Mr. Paul SwinwoodPresident
Software Human Resource Council

Professor Lars Osberg
Member
Advisory Committee on the Changing
Workplace

Mr. Andrew Jackson
Senior Economist
Canadian Labour Congress

Ms. Sue Jones
Project Officer
Public Service Alliance of Canada

Ms. Kerry Pither
Communications and Research Specialist
Canadian Union of Postal Workers

Mr. Peter Broadmore
Vice-President
Government Relations
Information Technology Association of
Canada

Ms. Catherine Chandler-Crichlow
Manager-Education Technology
Education Centre
Toronto Dominion Bank

Mr. David Stewart-Patterson
Senior Associate
Business Council on National Issues

Mr. Garth Whyte
Vice-President
National Affairs and Research
Canadian Federation of Independent
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Participants (continued)

Mme Nicole Senecal
Sous ministre adjointe
Developpement des resources humaines
Canada/Travail

Ms. Brenda Lafleur
Principal Research Associate
The Conference Board of Canada

Ms. Shirley Seward
C.E.O.
Canadian Labour Market and Productivity
Centre

Mr. Alex Turnbull
Partner
Goss Gilroy Inc.
Management Consultants

Ms. Karen Jackson
Director General
Labour Market Policy

Ms. Janet Dassinger
Director
Training Programs and Policies
United Food and Commercial Union

Mr. Peter Ferguson
IHAC Secretariat
Industry Canada

Mr. Robert Gillett
President
Algonguin College of Applied Arts and
Technology

Mr. Santo Alborino
Senior Manager
Employee/Industrial Relations
Bank of Montreal

Mr. Peter Doyle
Commissioner for Employers
Human Resources Development Canada

Mr. Terry Boudreau
Secretary Treasury
Canadian Federation of Labour

Ms. Sonia Salah
Policy Analyst
Status of Women

Collective Reflection
on the Changing
Workplace

Réflexion collective sur
le milieu de travail
en évolution

National Forum

**The Information Highway and
Workplace Issues:
Challenges and Opportunities**

Atlantic Report

Agenda

Hotel Beauséjour, Moncton, New Brunswick
Friday, February 21 and Saturday, February 22, 1997

Friday - February 21

8:00 a.m. — 9:00 a.m.   Registration — **Foyer - Ballroom A**

9:00 a.m. — 9:15 a.m.   Welcome and Introductions — **Ballroom A-SI**
Carmen Comeau-Anderson
Director, Labour Services Centre, Atlantic
Human Resources Development Canada
Moncton, NB

Overview of the National Forum Process
by the Chairperson of the Forum
Aldéa Landry, Q.C.
President
Landal Inc., Moncton, NB

9:15 a.m. — 10:15 a.m.   Panel Discussion — **Ballroom A-SI**

*"Impact of the Information Highway
on the Workplace"*

Chair: **Aldéa Landry, Q.C.**

Barney Dobbin
Communications, Energy and Paperworkers
Union of Canada
Halifax, NS

Dr. N. Paul Patterson
Chair in the Management of Technological Change
University College of Cape Breton
Sydney, NS

Curtis Howe
General Manager, System ·Engineering
NB Tel
Saint John, NB

Agenda (continued)

10: 15 a.m. — 10:30 a.m.   **Break — Foyer -Ballroom A**

10:30 a.m. — 12:00 p.m.   **Workshop A - Group 1 — Ballroom A-SI**
Facilitator: **Aubrey Cormier**

Workshop A - Group 2 — Boardroom
Facilitator: **Tom Garland**

*"New Approaches to Work that Utilize
Information Technology"*

12:00 p.m. — 1:00 p.m.   **Lunch — Ballroom A-SI**

1:00 p.m. — 1:20 p.m.   Introduction of Guest Speaker
Paul Daigle
President and CEO
Atlantic Provinces Chamber of Commerce
Moncton, NB

Guest Speaker
Dr. Teresa MacNeil
Johnstown, NS

*"Information Highway, a Solution and a Problem:
A view from Atlantic Canada"*

1:20 p.m. — 1:30 p.m.   Discussion

Thanking of Guest Speaker
Linda Gallant
Regional Director, Atlantic Region
Canadian Labour Congress
Moncton, NB

1:30 p.m. — 1:40 p.m.   **Pause**

1:40 p.m. — 2:00 p.m.   Report from Workshop A **— Ballroom A-SI**

Agenda (continued)

2:00 p.m. — 3:30 p.m.	Workshop B - Group 1 — **Ballroom A-Sl** Facilitator: **Aubrey Cormier**
	Workshop B - Group 2 — **Boardroom** Facilitator: **Tom Garland**
	"Working to Ensure Worker Job Protection"
3:30 p.m — 3:45 p.m.	**Break — Foyer - Ballroom A**
4:00 p.m. — 5:00 p.m.	Report from Workshop B — **Ballroom A-Sl** Synopsis from the day
	Wrap-up and Closing Remarks **Aldéa Landry, Q.C.**

Saturday, February 22, 1997
National Forum Videoconference

9:45 a.m. — 12:00 p.m.	Review of reports for afternoon session — **Hotel Beauséjour** **Ballroom A - Sl**
11:15 a.m.	**Wheeled-in Brunch**
12:15 p.m.	Transportation to the videoconference room at the Moncton Hospital (Taxis will be made available to participants.)

Agenda (continued)

12:45 p.m. — 1:00 p.m.   Information Session: Getting acquainted
with videoconferencing technology
and meeting format — **Moncton Hospital - SI**
                    G-1 Videoconference Room

Videoconferencing Technology will link all sites
for the Regional Reports
Moncton
Montreal
Hull
Toronto
Calgary
Vancouver

1:00 p.m. — 1:10 p.m.   Welcome and Introductions
Chair:
The Honourable Alfonso Gagliano
Minister of Labour, Ottawa, ON

1:10 p.m. — 2:45 p.m.   Regional Forum Reports Moderator: —
Mel Cappe
Deputy Minister,
Human Resources Development Canada
Ottawa, ON
Response to Regional Reports — **Moncton Hospital - SI**
                    G-1 Videoconference
                    Room

2:45 p.m. — 3:00 p.m.   **Break**

3:00 p.m. — 3:20 p.m.   Keynote Address
The Honourable Alfonso Gagliano

Agenda (continued)

3:20 p.m. — 4:20 p.m.   Panel

                             "Looking Ahead"

                             Moderator:
                             Mel Cappe

                             Commentary by selected representatives of different
                             sectors and from all of the Regional Fora

                             General Discussion

4:20 p.m. — 4:30 p.m.   Conclusion and Wrap Up
                             The Honourable Alfonso Gagliano

4:30 p.m.   Adjournment

SI - Simultaneous Interpretation

Welcome and Introductions

The Atlantic Canada Forum had 42 participants from all four provinces. The sessions were bilingual and dealt with the three major themes:

Friday, February 21, 1997

Opening remarks

Slide accompaniment indicated three major themes :

- Impact of the information highway;
- New approaches that use technology;
- Working to ensure job protection.

After Aldéa Landry, Chairperson for the Conference, welcomed the delegates and introduced the organizing committee, we proceeded with a panel discussion on the Impact of the Information Highway on the Workplace.

Panel: Impact of the Information Highway on the Workplace

Presentation: Barney Dobbin

The first panelist, Barney Dobbin, from the Communications, Energy and Paperworkers Union of Canada, presented a case study on the impact of technology on television distribution. He first highlighted some points from Parrot's Minority Report.

The prevailing theme is that deregulation or non-regulation misses issues that need to be addressed, such as market driven factors, labour standards, the need for a level playing field, the need for new federal legislation and for employer impact statements. The term "information highway" precludes digitization of the workplace in its current status. The television industry in on the tail-end of economic cycles and consequently has endured losses somewhat alleviated by consolidation. Digital storage costs have gone down. The process of producing television is changing - a workforce reduction of 50% is foreseen in the years to come.

Barney Dobbin talked about programming feed systems. CTV formerly sent microwave signals out of Québec, which were edited locally. ATV was microwaved from Moncton to Halifax, Sydney and St. John's, again with local inserts. 1989 marked the advent of satellite distribution from CTV. ATV kept Moncton as a feed until 1994, at which point they consolidated, as did MITV, causing job losses in this province. ATV now arranges three different feeds coming out of Halifax. 60 unionized workers who were employable and computer literate were laid off as a consequence. Two and a half years later, a

follow-up showed that only 9 have been re-employed. Three others found unrelated work. Employers have had unbalanced advantages. Despite government regulations of the industry (CRTC, etc.), no government approval was needed when it came to the layoffs. Why has this happened?

Back to the Minority Report, Dobbin noted that market driven solutions to unemployment combine with the erosion of labour standards. Training and retraining have become non-existent. There is a need for federal legislation. Some sections of the Canadian Labour Code are inadequate to deal with the situation, he said. There was and is a need for employee impact statements.

Presentation: Paul Patterson

The second panelist, Paul Patterson, from the University College of Cape Breton (UCCB), recalls Marie Antoinette's quip about cake - the unemployed protest? The answer would be, in that vein, give them computer training, have them buy computers, give them Internet based systems, and launch internet-based businesses. He said that advice comes from academics and parachute-club members, but it is not wrong. And he made the point that the information highway must have "its rural roads and its country lanes". Champions are needed to make it happen.

The UCCB has taken a role as an agent for change, Patterson explained, so that the people of Cape Breton can all be provided with proper access. Cape Breton lacks resources which are givens in metropolitan areas: financial resources, skilled people to run networks, etc. They lack those resources that would ensure the transition from a resource-based to a knowledge-based economy.

Two IT models were explained by Patterson: the broadcast and the Internet. The broadcast model is centralized and consumer-oriented and serves the giants in the economy. The Internet is collaborative, omnidirectional and sized to development potential. It serves local needs. Patterson went on to describe the projects realized in Cape Breton where social infrastructures are being put together. Right now, he said, most talk about the future includes the Internet. Local efforts are valued. Farm teams are being formed to ensure that these values are being taken care of.

In conclusion, Patterson stressed that "We have to work with people who are unemployed, and we have to look at their individual need when we think of retraining." Partnerships between technology and business, between young people and displaced workers (TAGS), internships, have to be oriented towards producing rather than consuming. There must be main roads and there must be byways.

Presentation: Curtis Howe

Our Final panelist, Mr. Curtis Howe, was from NB Tel, representing business. He gave an example of how his company, Bruncor, has made a successful transition to the challenges presented by the Information Highway. In regards to computing power, telecom power and video-active network capability, Bruncor developed a clear strategy to:

1. set up a world-leading infrastructure in New Brunswick;

2. attract electronic users; and

3. lead the technology industry 'needs and services'.

After five years of transition, Bruncor has several partnership arrangements with leading edge companies in California and New Brunswick in the area of health futures, interactive communications, call centre technology, and internet and wireless communication. Bruncor made this transition by fundamentally changing the way they linked the technical system ('work') with their social system ('people').

Although many issues were accurately predicted there was a mis-match in the skills needed, thus requiring a lot of retraining. Another aspect not articulated or correctly forecasted was the extent of changes that would occur through running this business. It was desirable to create a positive creative environment. 1990-91 marked a pilot program to do the tough jobs of rethinking the social dimension within the organization. Overall, Bruncor considered the bottom line as important as employee standards, but the transition has been successful.

Workshop A: New Approaches to Work that Utilize Information Technology - Group 1

Adrien Charette, CUPE, observed that telework does not always offer optimal working conditions. Home work is often offered to women to reduce operating costs. They find themselves caught at home, as they were before they entered the work force. Their working conditions and atmosphere are often poor.

David Hawkins observed that young people feel hopeless in Cape Breton. "We need to understand the psychology of rapid change." The pace is slower in the Atlantic and traditions are more valued here than in many other regions. "We have not addressed psychological effect of change. 10 to 15 % enjoy and even initiate change; 25%, if pushed will adapt. The majority are resisters and need daily encouragement." Universities have also shown resistance in dealing with change.

Peter Vuillemot, Atlantic Provinces Transportation Commission, said that transportation used to be regulated in a heavily bureaucratic way, but has been a deregulated sector since last year. Planning began 3 years ago. The directives were: no loss of jobs except through attrition and transfer. People had to adapt to a new way of doing business. A new workplace sprouted over the week-end, the workers had to have a new frame of mind. After 8 - 9 months, the culture has changed . People have to accept responsibility for decision making. They have to adapt to the hardware. A study to prejudge degree of acceptance of change turned out to be useless as a predictor of actual reactions. Another point, Vuillemot continued, is that the development of products and services takes more people than the delivery once things are going. He expected that his office would get smaller, because of increasing contracting out, and later become a virtual office with workers everywhere. Right now, work at home is employee initiated, he said. Retraining allowance was thought out in advance as well as financial counselling for people laid off. For some months, the marketing budget was allocated to retraining.

Aldéa Landry stressed the need for more research on new work arrangements such as telework. For many people, these are positive changes, but we must know what consequences they have, in order to protect people. Some people have the personality required to adapt to change, but major government policies must take into consideration the problems of people who cannot adapt easily.

Paul Patterson found it interesting to see the differences between men and women. Men like to work with the hardware, take it apart, etc. For women the tendency is to take the given and use it for something. The psychological impact of telework must not be that of the sweatshop, with number of keystrokes as measure. We saw telework as empowering people but it can result in greater isolation, and ambiguous feelings as to their worth or status as workers. The environment may be non-work environments yet they must still work. Who does the driving? Market forces?

Jean Nadeau, E-Com Inc., suggested that it is not just a question of work-force reductions. There is a lack of information and fear among managers and entrepreneurs as well as governments. People are still not convinced, do not yet have a long-term perspective. Governments must act to promote change and not delay it.

Barney Dobbin used the example of radio stations to illustrate how workplace redesign means chaos. Telephones, he reminded participants, were toys before having any kind of business applications, and computers can be seen in the same light. Supervisory personnel at the beginning of a change process tends to be wed to the old methods, and that is a difficulty when redesigning the workplace. Dobbin suggested that companies should hold to original projects, or mandates and plans when changing over to the new technology. We have to figure out a slower way of implementing change; embarking on the possibilities rendered possible by the new technologies can cause overload.

According to Patterson, businesses simplify their mandates as they grow and become more focused. They introduce new technologies and think that they will have an immediate improvement in efficiency. But the opportunities for change are so numerous that you can't anticipate all the possibilities. There is a lack of collective approach in strategic planning, noted Patterson. Everyone is playing with new features. He recommended that people stick to their original goals.

Vuillemot said that managers find it acceptable to have chaos as long as there is improvement down the road. "Over time, chaos gets under control; we accept it and we deal with it."

George White, Cape Breton Development Corporation, observed that executives often don't know what to do with technological change. Earlier, they had fewer expectations of industry, and there were fewer regulations. Ford, for example, could not foresee shopping malls and commuting as a results of cars. White referred to the new situation of call centres all over the planet. "We don't know where things are."

Mary MacLeod, PSAC, noted that people who leave government positions are well versed in modern technology and the Information Highway, and still find it difficult to find jobs. The loss of worker benefits is a concern. Job losses are a stress for those who lose the jobs as well as a stress in the workplace - whose job is next? People are laid off and replaced with contracted-out personnel with no benefits, no pension. Governments tend to ignore upcoming problems when retirement funds run out. There is additional stress from the monitoring of some abusive supervisors. People working in telecentres, in particular, don't feel good about being watched.

Jean-Valmond LeBlanc, Assumption Mutual Life Insurance Company, explained that Assumption is not a large company yet realizes computerization is necessary to ensure that the company is profitable and viable.

Jean Nadeau observed that there is an impact on working conditions and that telework may or may not reflect a choice. In addition, the Atlantic region's culture has not habituated people to the speed of new production. Even when it is voluntary, change occurs is anarchy, and "that is going to require us to re-invent work".

Group 2

Beverley MacIntyre, BKM Research and Development, opened the discussion with her interest in the training perspectives. "There are lots of opportunities, but there is a real possibility of displacement before it's over and the disparities will be greater, not only 'good job - bad job' but also 'job - no job'."

Kathryn Small, Clarenville Telematics, talked about Newfoundland's rural strategic plans, and Operation Online. The province does not have a solid infrastructure as in New Brunswick. Research and Development is something we look at.

Ross Mitchell, commented on Dobbins and Patterson's remarks - the displaced are often from large institutions; entrepreneurs are the ones that seem to be creating the new positions which are not necessarily matches for the lost ones.

Jerrie Fowler, Information Highway Secretariat, indicated that a number of firms do create new jobs - 2500 have been created through IT in New Brunswick. The media understands that there is an economic transformation going on. Training is essential - there is a tremendous shortage of highly skilled technological workers. Production and development work creates employment. Universal and affordable access needs to be addressed. "It is feasible in N.-B. due to our geography, but we're not sure whether it's happening across the country." Technical training is needed to complete the accessibility.

Michael Bradford returned to the main theme - is there an adjustment that is limited to the technical skill? According to Fowler, there is a definition of skills which changes over short periods of time.

MacIntyre indicated that the academic ability to learn is not enough - expectations as well as attitude toward change must be combined with support and strategic planning.

Noreen Lobban, Miramichi Community College, said that technology should create more jobs. Employers don't seem to have a world market view; they want to invest in their employees, but they need to have strong human resource plans in place.

For Small, IT offers an opportunity to educate people. Fish workers can be retrained, but they could also return to their displaced jobs with better skills. Most opportunities are self-made opportunities and consist in telework from faraway places.

Bradford commented that we are getting better at counselling people.

Fowler evoked a N.-B. program where 35 people on income assistance were given basic training for two weeks, so that they could teach the basics to others. "When we cut back on this project, the communities affected protested. We hope to try the same project with 200 others."

Brian Beaton said that, from a union's perspective, this is one of the hardest times for keeping jobs. "We have to cross-train, and we have to take walls down that prevent proper training. Government funding for training has dried up." In addition, minimum wage is very low in the Atlantic Provinces. 200 years ago, Taylorism took away the skill of the craftsman. Today, skill is valued again, but it is now "multi-skills". There is a need for training.

Trudy Brake, Newfoundland Association of Public Employees' Union, found Patterson's remarks disturbing. Although prospects are bright in Cape Breton, there is a growing polarization in Newfoundland. Literacy is approximately 40% and rising, due to a net

migration problem. Public institutions are increasingly underfunded, and strategies to increase accessibilities, in libraries for example, are being countered by the closing of libraries.

Small underlined that this could be the last opportunity for Newfoundland to create partnerships. Everyone has to come to the table. Tom Garland supported her statement. Small said that a lot of the work is being done at the grass-roots level out of necessity.

Fred Furlong, Canadian Union of Postal Workers, had the same concerns over Patterson and Howe's comments: "There is a lot of self-initiative, but there is no overall guidance for retraining on the part of business and government."Canada Post is considering setting up Internet stands in their 40,000 post offices across the country. We are changing the meaning of 'partner', he continued. Although partnerships are positive in themselves, it is too often a way for government and employers to pass off responsibilities to community groups.

Andrew Barss, Communications Nova Scotia, suggested that 'more jobs' should also mean 'better jobs'. It is an employer's responsibility to foresee changes and prepare employees for them. Moreover, it is important to look at the rural situation - the Information Highway has brought forth a tremendous opportunity to compete in the world market. "We've developed leading-edge and world-competing companies right here."

Furlong emphasized that workers don't compete. Their employers do. Employees should be rewarded for helping their employers make money. There should be equal advances for them.

Garland asked if workers have to take a different focus in the new economy.

According to Brake, in most of Canada, employee training is "terrible" and failing at keeping people employable.

Chris Scott, Canadian Federation of Labour, explained that one of the CFL's initiative is to get managers and unions together for training sessions and needs definition. "It is up to both to find training funding."

In the past, Garland commented, we measured numbers of people trained. People agree about the importance of training employees, but employers are locked into rigid views. "How can we get everyone moving in the same direction?"

Participants generally agreed that there has been a tremendous amount of failure in educational training. Employees are not consulted as to the long-term changes needed to protect the workforce and watch as their companies go into the ground. One community college in Nova Scotia was shocked to hear that Canada Post had no apprenticeship programs.

The constant impact of high unemployment rates was evoked. Linda Gallant, CLC, reminded participants that real poverty is an issue. In the global market, people are pressured to take low jobs. "But why do the jobs stay here? What stops Moncton telemarketers from moving to Chile?" Garland disagreed. According to him, globality is sometimes an excuse for concessionary bargaining. One person indicated that deregulation in the skies was a good yardstick for globalization - it will ruin our skies in the years to come.

Barry Curley, Department of Community Affairs and Attorney General, expressed his concern with the current situation. Companies have only recently evolved and are endangered by their downsizing approaches. Partnering is needed to help them survive. "This won't happen in I or 2 years - there has to be a long-term strategy un place." Curley added that a lot of training is wasted because it's not tailored to long-term needs.

Furlong observed that there is a large pool of untrained, unemployed workers - and that's why the companies keep settling here. MacIntyre added that there are many low-paying call centres. On the other hand, virtual solutions are being used to train nurses, for example, and this is positive.

Presentation: Dr. Teresa MacNeil - Information Highway, a Solution and a Problem: A View from Atlantic Canada

The guest speaker, Dr. Teresa MacNeil, highlighted the necessity of getting many intervenors to agree on what values are most important for "the common good". Laissez-faire capitalism assumes the only goal is the pursuit of self-interest. Until issues are discussed fully, we cannot move ahead as a society. Our sense of community is one of the most vibrant forces at play in Atlantic Canada and we need to push our creativity forward.

In a subsequent workshop discussion, three examples of partnerships breaking down the traditional barriers between labour and business were cited as positive examples: DEVCO, Hawk Communications, and the Literacy Strategy in New Brunswick. There needs to be ownership for social responsibility. It was recommended that cases where companies or role models are succeeding in the endeavour should be documented and communicated widely.

Information technology is extremely portable; we risk losing people. We must encourage better employment practices and government should have an overseeing role, holding back on regulation which costs money to everyone. The importance now is to close the gap and develop required skills. Business favours incentives over regulations.

Lifelong learning was a strong theme of the keynote speaker and in the ensuing discussion. There was consensus on its importance and the shared responsibility of governments, employers, individuals, and educational institutions. The role of universities in particular was questioned: is it education or training for jobs? This is a continuing debate.

We must identify barriers to retraining. It is difficult to balance all the demands and lifestyle constraints, such as child care, that are faced by workers, including single parents. We need to be creative to deal with new options and new processes not yet explored i.e. with a new paradigm. Training and skills development cannot be dictated by market conditions alone but must also be applicable to Atlantic Canada's aspirations. A new partnering culture also needs to be created in order to protect workers and ensure that we can compete globally.

The guest speaker also noted from her involvement in various consultative bodies like the Labour Force Development Board that the process of community consultation is often lengthy and time consuming. Sometimes the marginal groups grow frustrated with the timing and need for action. The decision makers often look at who is participating in these consultative groups and make assumptions based on this rather than on the ideas being espoused.

Training for workers has to reflect different categories of workers and age groups. It has to be accessible, flexible and multi-faceted. In this context we need to ensure that displaced older and middle-aged workers are afforded the opportunity to re-train and thus participate in the new and emerging information economy.

The keynote speaker also stressed the importance of competency standards replacing the notion of pre-requisites in the existing formal sense. Information technology is only part of the equation for lifelong learning; globalization and other factors also come into play.

Aldéa Landry thanked MacNeil. She commented that "'technology is no substitute for ideology".

Workshop B: Working to Ensure Worker Job Protection - Group I

According to Jean-Valmond LeBlanc, Assumption Mutual Life Insurance Company, the best protection for workers and their jobs is to welcome IT. "We are going to create jobs and protect those who are already there."

Ron Kelly, PSAC, stressed the need for regulations or commitment to their establishment. To protect workers, we must ensure that regulations are not imposed but decided on by industries and companies, as to their direction, their type and the pace at which they are implemented. Protection needs to be lifelong and therefore long term relationships and arrangements must be entered into with educational institutions.

A labour representative commented that, in technological change, the first priority is the involvement of government in the process

According to David Hawkins, Hawk Communications Inc., many people tend to look to corporations and institutions instead of taking personal responsibility. Employers are too often expected to take the initiative.

Workers need employers to pay for benefits and retraining. Guaranteed income should be considered and the access of currently "unemployable" people to continuing education must be ensured.

As emphasized by Adrien Charette, CUPE, when seeing negotiation as an avenue for protection, it must be remembered that only 22% of workers are unionized. Many employers don't recognize that workers are their prime assets. Government intervention is necessary to ensure that companies take their responsibilities toward workers and do not require workers to take the load. Moreover, political interference may impede establishment of protection policies, he added. "Life education has to be for both givers and receivers of services, both employers and employees."

Paul Daigle, Atlantic Provinces Chamber of Commerce, saw a lack of positive incentives for companies to train their employees. Constraints are discouraging for businesses, he noted and, if there are real needs out there, they are not for more controls. "More laws are not a good way to protect and create jobs. Increase incentives, not regulations."

Charette warned business against shifting costs to workers. "When employers do this, this is when regulations are necessary."

Ron Kelly, PEI Union of Public Sector Employees, agreed that training is essential. "One way to go is the grant levy, to be pooled for retraining", he suggested. He saw a need to teach critical thinking and such tools for life at the basic level. A distinction must also be made between basic education and retraining, and then between training for specific jobs and retraining for greater mobility of the worker, he stressed.

Mike MacIntosh, Labour and Employment, suggested that the first impact to expect is chaos. Information Technology is an immature sector, he said. "We first have to identify mechanisms which start change, and favour shared solutions, not more fences."

Aldéa Landry pointed out that we must realize we are not in the best of all possible worlds. However, we have to find grounds for agreement. Regulation, she continued, should not be from a by-gone era; we cannot let the market economy solve problems of technological change. We have to conduct research and facilitate reflection. We also have to identify problems, for example, problems that affect young people and workers in transition. "We have to see how we can promote the development of workers in the new era," she added. She also pointed out that, although countries without regulation can change direction more rapidly, it is not the only consideration.

Hawkins stressed the need of good incentives as well as for role models for employers. Government should encourage the development of role models, through reference material and seminars. He also raised the issue of age: people over 40 are apt to be replaced by younger, less expensive and more flexible workers. Another noteworthy element is that this very consultation only has 25% of delegates from the private sector (business).

Peter Vuillemot, Atlantic Provinces Transportation Commission, said that, because of the extreme portability of IT, there is a risk of losing people. "We must therefore encourage better employment practices. In addition, government should have an overseeing role and hold back on regulation which costs money to everyone. The important thing now is closing the gap, and developing the skills required by employers."

Landry stressed the risk of polarizing forces and pointed out the need to protect jobs in Atlantic Canada. "We currently have a strategic advantage. How can we make the most of it" Hawkins agreed and mentioned the lower costs and the telecommunication infrastructure. "How do we keep the edge?" He stressed the importance of human resources.

In the opinion of a business representative, partnering is the only way to improve our edge. We can ensure development by not entering into oppositional relationships. He agreed on the need for incentives, not new regulations.

Mary MacLeod, PSAC, also thought that union and management must work together for the sake of the "victims"of IT. She used the example of the increased incidence of carpal tunnel syndrome (repetitive action syndrome) as a result of new technologies such as those introduced in the Tax Centre in PEI. The federal government, she added, needs to be the leader, yet it sets a bad example. "We haven't been able to change the wording in our Collective Agreement since 1989." A labour person from Moncton agreed on the need to modernize regulations.

Moderator Aubrey Cormier noted that partnerships have been emphasized between governments and unions and between employers and employees. "We have to develop a partnership culture, to protect people and to ensure we remain in the race in world competition." We must also identify barriers to retraining, he noted, such as professional, financial, cultural and family constraints.

According to George White, Cape Breton Development Corporation, partnering with unions on common goals is essential. In addition, agreements for the betterment of industry must be attached to bargaining agreements. "For safety and health issues, we have set up tripartite commissions including the federal government, union and management. They review and then approve or veto changes to protection. It is a way of raising problems, bringing a solution, and then, later, of raising them again", he explained.

Hawkins recounted that his firm was be among the early users of IT, when it costed more. He rejoiced about their current leading position but, "reverting to [his] right-wing, greedy persona", regretted the fact that they were not more competitive. He explained how the firm recently formed Hawk Digital Club for suppliers, important clients, employees, and freelance personnel. "We meet monthly to deal with issues. We have a poster. This is the place to speak of safety and of training. Suppliers & customers understand our needs. We are working with each other." Businesses need encouragement, he concluded.

Charette presented a literacy project whose goal was to create 100 programs of 20 learners over 3 years. In one year, they had 150 programs and now, after 4 year, 783 programs. Companies give material and money. By 2000, all high school graduates are to be computer network literate. "It is the social responsibility of agents of technological advances to provide training for their new products. We need more meetings like this to further discuss issues, to become really responsible", he added.

A participant agreed on the need for examples of workplaces where this works, where people and companies work in this novel approach without layoffs. He saw a role there for government.

Lana Payne, CAW, underlined that, in the light of the loss of 20-30 000 jobs, training clearly had a positive outcome for some, but not for most. She reported a general disaffection for training on the part of workers: "Training - for what?"

In summarizing the workshop, she noted the need for regulation, but no consensus was reached. Because we do not want more regulation, we have to adapt regulations, so as to avoid mortgaging development. We have to find alternatives, examples, incentives, to define government roles and establish partnerships between the public and private sectors. Income insurance, a kind of "grant levy," could be considered or a payroll tax for redistribution. Management of change, its speed and direction, must be negotiated. It is difficult to negotiate, however, she added, where unions do not represent the majority of workers. Jobs must be protected and more created through lifelong training. We have to identify barriers to training and publicize examples of positive transitions.

"This is only the beginning of the discussion."

Group (2)

Ross Mitchell, Government of Nova-Scotia, added to the points made earlier about job protection. He stressed the need to consider adequate severance packages. "If we concede turnover as unavoidable, should there be severance requirements? Should they be tied to retraining?". In Nova Scotia, he said, there is a requirement for notice of termination, which can be substituted for pay. In our world of continually shifting jobs, a safety net should be put in place for situations of breach of contract.

Negotiations can go beyond basic problems, Tom Garland said. However, Trudy Brake observed that the standards are sometimes so minimal that they are useless. "Two weeks notice or pay in lieu doesn't replace training." Garland asked if international standards and conventions are being met and Linda Gallant replied that these are bare minimum. Brake noted that banks and insurers have displaced thousands, many without notice. It is hard to establish standards for new work when it's work at home for example, commented Gallant.

Ross Mitchell made the distinction between an employee and a "self-employed contractor". Gallant remarked that the latter have to provide their own safety net and are also like people who have to "buy their own jobs".

Brake talked about the drastic health care restructuring in Nfld and said that teleworkers don't get workman's compensation. Garth Jenkins, Abegweit Seafoods Inc., related some of the complications to the very definition of the workplace. "If the employer is responsible for the safety of the workplace, how can he do so if you work at home?" Linda Gallant underlined that there are different levels of choice. Fred Furlong noted that outsourcing distances responsibility - the sub-contractors do work for their employees - who are seen as contractors. Garland agreed that this is an issue in which responsibility is not clearly defined.

Beverley MacIntyre, BKM Research and Development, observed that there is no collective arena for these employees. They have no place to go for advice. Brake added that "many will also never have the collective strength of a union". Garland commented that, ironically, the Internet doesn't really encourage collectivity, though MacIntyre noted that it is possible.

Furlong noted that, in the past, self-employment was more often a personal choice. Now, it is more often than not a forced situation. Another issue, commented Fowler, is the changing skills which mean that one employee can be replaced more easily than retrained, in the opinion of some companies. Furlong added that this is an important point about worker job protection. "We talk about increased productivity a lot; we can also talk about a shorter work week without loss of benefits."

Brake also noted that some people are working far too many hours. MacIntyre added that deadlines make it worse for the self-employed.

Kathryn Small asked who was going to define quality standards. Garland replied that competition sometimes lowers standards. Companies say that they can't give their employees benefits the competition isn't offering to their employees. Brake noted that, ironically, it seems easier to set standards for machines than for people. There must be minimal standards to protect employees. Andrew Barss, Communications Nova Scotia, suggested that people often don't know about products that are the result of child and forced labour camps in other countries. Brian Barton, International Association of Machinists and Aerospace Workers, indicated that, in Halifax, on Labour Day, the unions set up information booths in malls to educate people and stress the need to buy Canadian.

"Opportunities are missed when you don't retrain", Barss commented. Laying off and hiring new workers presents a hidden cost. Garland noted that, if you lower labour costs, you can lower wages or raise productivity. The death of the baby boomers will have a strong impact, predicted Beaton. Fowler noted that seniors don't seem to have the problem that boomers have with technology. "It is the approach and the attitude". Garland noted that seniors seem to be comfortable with it in part because it is non-threatening. Garland pointed out that IT was never created to destroy us but to liberate us. How do we get people to embrace change? MacIntyre reminded participants that the invention of the telephone caused similar reactions. "We don't know where we're going", added Garland. Small remarked that Canadians in general seem more open to change.

Gallant brought up the issue of workers security: "We have made the UI system worse. We've lowered the social policy infrastructure in the Atlantic. They are - they have to be tied together." Garland noted that those who can change things are not listening. Blake added that "you cannot retool and then fire".

Fowler remarked that the skills that are requested are high, but employees are not being told what they need to complete equivalency. Small emphasized that the basic skills - the 3 Rs - and the whole educational system are still the essential building blocks. Machinists and engineering jobs are in great demand. There are opportunities that need to be maximized. Protection needs to be put to the workers.

According to Barry Curley, we all benefit from a successful transition to different types of work - but transitions sometimes have to be assisted. Garland concluded that, although many strong ideas were presented today, there are no magic bullets.

Discussion

George White suggested that a comparison can be made with the way people dealt with environmental concerns by forcing companies and individuals representing those companies to be responsible for their own actions.

Several participants supported a collective search for solutions and the involvement of all parties. The lack of concern of senior executive for these issues that potentially affect their productivity was also noted. Small warned against too strong a swing of the pendulum towards government intervention and regulation. Landry suggested that the way legislation is adapted to the current situation is extremely important.

Peter Vuillemot stressed the need to be sensitive to the fact that the Maritimes are in the midst of a culture shift. Lobban added that the shift is toward a far greater small business enterprise world

Gallant felt that legislation was clearly considered as the most important factor in her workshop. "This means employment standards, definition of employment, and home work should be covered to protect workers."

As underlined by Ron Kelly, it is in everyone's interest to share the costs of new technology.

Aldéa Landry closed the session. More than partial or conclusive answers, the day's discussions resulted in a dialogue, she noted. No consensus was reached, she added, but all the issues covered are part of the problem.

Recommendation: To try to establish a way to gather the best practices in each field.

Saturday Morning, February 22 1997

Aldéa Landry opened the session and suggested that the group prepare a summary in point form of the previous day's discussions for the afternoon National Forum.

Gladys Vivian suggested asking the Minister to define more clearly the role of government.

In Peter Vuillemot's opinion, the Atlantic region should be pro-active and offer suggestions first. Paul Patterson pointed out that the Parrot Minority Report applied to Atlantic Canada more than to any other region.

Jean Valmond LeBlanc wondered whether new approaches to technology were really discussed. According to Aldéa Landry, although it was an issue, the main goal of the Forum, more than anything else, was to reflect on approaches from the point of view of the impact on workers.

Ron Kelly asked if it is possible to set up one or several news groups, or list services, for follow-up discussions. William Kowper, Halifax Metro Police Force, said that he checked last evening at "gc.ca" and found nothing about these forums; he recommended as well that a site, perhaps this one, be beefed up and continued for discussion purposes. Patterson mentioned the "Future of Work" site as another possible news group. Gallant added that the forum process is for the Collective Reflections report, and that they also have a netsite.

Adrien Charette pointed out the general consensus during the meetings the previous day on training and working conditions. He suggested a positive focus, including the suggestion of follow-up conferences. Lana Payne recommended follow-up sessions to deal with research and role models. Patterson stressed the importance of not leaving out "those we are talking about". Websites allow those directly affected to participate. Payne reiterated that it was vital not to lose the idea of having a compendium of best practices.

George White called for pragmatism - "you can't go forward with anecdotal information". Workers are being displaced, he reminded, as are businesses, and sometimes technology is responsible. We agree that they need to be retrained, but we can't promise them jobs.

"The follow-up forums should be a progressive sort of thing so that some of the more difficult issues can be addressed. Let's clear the table of the easier issues."

Patterson noted that government could identify general skills areas. There was more general discussion on skills training and setting up a net site. Jeff Vey, Auracom Internet Services, offered his company's assistance to put up the discussion site. Linda Gallant expressed frustration at the lack of accessibility to translation at this Forum.

Over lunch, David Fowler and Trudy Brake prepared an outline for the afternoon discussion. Fowler explained that they had decided to deal with issues in a conceptual way. "The tone is as important as the actual content." They presented the four points they identified:

- Workers need protection through minimum standards. "We may disagree on exact measures, but we agree on the need."

- There are significant opportunities for partnering.

- There is an absolute necessity for ongoing training and retraining for employees and displaced workers. Funding and responsibility are up for debate, later.

- Governments at all levels need to lead by example, to encourage employers. And the private sector as well.

Participants

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Association des étudiants
  et étudiantes de génie
Université de Moncton

Atkinson, Mr. Bob
Vice-President, New Media
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Babington, Mr. John
Chief Operating Officer
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Baker, Mr. George
Canadian Auto Workers

Barss, Mr. Andrew
Coordinator, Multimedia
Communications Nova Scotia

Beaton, Mr. Brian
Staff Rep - Grand Lodge Representative
International Association of Machinists
  & Aerospace Workers

Boothroyd, Mr. Ted
Communications Branch
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Bradfield, Dr. Michael
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Brake, Ms. Trudy
Newfoundland Association of Public
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La Société Éducative - Î.-P.-É.

Cowper, Sergeant William
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Gallant, Mr. Ray
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Hawkins, Mr. David
President
Hawk Communications Inc.

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President
Hawk Communications Inc.

Howe, Mr. Curtis
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Landry, Madame Aldéa
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Collective Reflection
on the Changing
Workplace

Réflexion collective sur
le milieu de travail
en évolution

National Forum

**The Information Highway and
Workplace Issues:
Challenges and Opportunities**

Quebec Report

Agenda

Friday, February 21, 1997 Radisson Hôtel des Gouverneurs
777 rue Université, Montréal, Cartier Room

08:30   **Welcome and Introductions**

                   Josée Goulet, Forum Chair
                   André Gladu,
                   Assistant Deputy Minister, HRDC

09:00   **Topic 1** — The Impact of Information Technologies, particularly
                   the Information Highway, on the Workplace

                   Presentation
                   Speaker — Réal Jacob, Professor, UQTR
                   The World of Information Technologies and the Information
                   Highway: The Challenges of the Changing Workplace and
                   Employment Relations

9:45   **Break**

10:00   **Discussion** (See Appendix 1)

11:00   **Topic 2** — New Work Arrangements and Organization related
                   to the Information Highway

                   Case Study followed by Discussion Period
                   Guest speakers — (See Appendix 2)

                   Presentation — An Emerging Phenomenon
                   Guest speaker — Alain Pinsonneault, Professor, HEC

                   Presentation — Self-employment
                   Guest speaker — Pierre Bertucat, *L'Autonome* magazine

12:15   **Lunch** (Chez Antoine, Hôtel Radisson)

Agenda (continued)

13:30	**Topic 3** — Measures to Promote Improved Working Conditions
	Discussion (See Appendix 3) Facilitator — Jacques Desmarais, Professor, UQAM
15:00	**Break**
15:15	**Summary** — Regional Report to be submitted to the National Forum on January 22
16:00	**Closing Remarks** — Josée Goulet

Welcome and Opening Remarks

Lise Martel, Director of the Labour Branch for the Quebec region, introduced Josée Goulet, who acted as Regional Forum Chair, to participants.

Josée Goulet explained the Forum context as well as the format and goals of the National Forum. She then presented the agenda for February 21 and 22 to participants and introduced the first speaker, Réal Jacob.

Presentation: The Impact of Information Technologies and the Information Highway: The Challenges of the Changing Workplace and Employment Relations.

Réal Jacob, professor of management at the Université du Québec à Trois Rivières (UQTR) and principal researcher in the Bombardier Chair of technological change management, tried to demonstrate how the introduction of new information technologies must be accompanied by efforts to rethink the whole organizational context of work.

Failure Factors in the Introduction of New Technologies

According to Réal Jacob, we should be aware that introducing new technologies is a difficult task; there is a failure rate of 55% of all re-organizations. New technologies are too often introduced ignoring the organizational life of the business. By keeping organizational variables in the forefront, he explained, it is possible to avoid the mistakes that most often explain such failures:

- Lack of awareness of the change process;

- Dominance of determinist and technocentric views;

- Development of passive attitudes in expectation of the reaction of people affected by new technologies;

- Training single-discipline project teams;

- Underestimation of the importance of the awareness-raising process.

> *"... introducing new technologies is a difficult task; there is a failure rate of 55% of all reorganizations. New technologies are too often introduced ignoring the organizational life of the business.*
>
> Réal Jacob
> Professor, Université du Québec à Trois Rivières

The first cause of failure, Réal Jacob continued, is based on the belief that new technologies themselves bring success. The people who plan projects to introduce new technologies know where they want to implement them and for what strategic purposes. Too often, however, the question of how technologies are introduced into organizations is not addressed. The change process is underestimated, even misunderstood. In studies on the effects of introducing telematic service terminals, the result of their introduction was

assessed with the objective of reducing costs through layoffs of front-line staff, the staff responsible for reception. It was shown that, if there was a cost reduction, it was not due to a reduction in front-line staff. On the contrary, the main result of telematic service terminals, he observed, is to better inform the public. Introducing telematic service terminals therefore required reception to become more professional and staff training to enable staff to answer the questions people asked.

To counteract the determinist and technocentric views that were identified as the second cause of failure, a view of new information technologies as a new field of potential must be adopted, Jacob continued. There is popular consensus on one point: we have to take the new technologies route, but not at any price. Beneath this apparent consensus, however, is often hidden a difference of opinion between management and unions, with management insisting more on the need to take that route and unions more concerned about the price to be paid, for example, with the dequalification of work phenomenon. Those are two kinds of determinist logic, optimistic logic on one hand and pessimistic logic on the other. Technocentric logic often leads to decisions that risk having no impact. That may be the case with the recent decision of the Department of Education to invest in computer equipment for schools. Will increasing the computer/student ratio have a real impact on teaching?

According to Jacob, it is important in any technological change to involve all the people affected early in the decision and not to wait for their reaction once the new technologies are in place. Increasingly numerous individualized computer instruction projects in our universities, whether instructional software navigated by the student or support provided by the instructor via electronic mail, are thus doomed to failure if professors are not involved in redefining the instruction task. There is a risk they will feel they have become appendages to the machine.

The fourth cause of failure requires little clarification, Jacob commented. It is sufficient to indicate that 85% of teams are single-discipline, generally consisting of individuals responsible for the management of technical objectives. He explained that in NCIT networking projects on client problems in the health and social services sector, clinical practitioners who are close to client needs are often marginally involved in the projects.

Finally, we should never underestimate the importance of the awareness-raising process, he added. We can re-examine the example of the upcoming introduction of computers to schools, the case of schools in the Montreal region. Such schools generally serve a clientele with diverse ethnic origins. New technologies will only find takers among teachers in this setting if they are made aware of ways to use the tool to work on problems important to them, for example, adapting instruction to their clientele. It is the same situation if we look again at the example of individualized instruction in university. If we make instructors aware that most students now study part time and have heavy, complicated schedules combining work and study, they will be more receptive to the idea of individualized instruction.

Successful Implementation of New Information Technologies

We must therefore recognize, according to Jacob, that introducing new technologies always has significant social and organizational effects. The bigger the changes, the more necessary it is to manage the interface between the characteristics of the technology and the characteristics of organizational life. We therefore need to raise the awareness of all staff, involve them, prepare them for the changes (mainly by adequate training) and, finally, to generalize, that is to take into consideration the effects the changes have on all the organization's practices.

Thus, he continued, information technologies that allow telework create a recognized delocalization phenomenon identified by an erosion in the sense of belonging to the company, even the business culture. The resulting mercenary attitude means what the business saved in the cost of office space is lost due to the departure of qualified employees. Delocalization can also be detrimental to the satisfaction of employees' ambitions for promotion. Employees who choose telework, often the best and most motivated, subsequently have less chance of being promoted, promotion being dependent on "office politics." We have to try to predict this kind of complex effect on business if we want to ensure the successful introduction of a new technology.

Jacob stressed that it is always important to accompany the introduction of new information technologies with a good training program on the use of the technology, but sometimes also on a topic appropriate to the business or work organization issues. Jacob cited the example of a company that had decided to install laptop computers on the factory floor to enable employees to access data on workplace health and safety. The introduction of the technology had negative effects, however, because supervisors and unit managers who were insufficiently prepared were not able to answer questions satisfactorily. With more training, the company could have avoided the frustration this initiative created for employees instead of satisfying them.

Any technological change must therefore take into consideration the potential effects on people, whether economic (job loss, for example), psychological (potential changes in interest in work), socio-psychological (changes in interpersonal relationships at work), socio-organizational or ethical and societal.

Discussion

Josée Goulet
Chair of the Regional Forum in Montréal, invited comments by participants

Christian Payeur, Centrale de l'enseignement du Québec (CEQ)

- The insistence on the probable effects of computerization on management practices, which we used to reproach unions for in the past, is now on the agenda. How can we move from ideas to management practices and negotiation that really change?

- In a context of cuts that make all negotiation difficult, how can we succeed in really changing management and negotiation practices as they relate to the introduction of new technologies?

Michel Doré, Confederation of National Trade Unions (CNTU)

- Need for a view of new technology introduction issues that is neither technically-nor economically-based. Neither technological changes nor competitiveness are ends in themselves.

- What are the popular democratic mechanisms for discussion, between unions and employers, of the ultimate purpose of the introduction of technologies? In the public and parapublic sector, management is not always open to debate with the powers that be.

Jacques Garon, Conseil du patronat du Québec (CPQ)

The gaps between social models and new information technologies are often the topic of sterile debate between employees and employer in large corporations, as Jacob explained. In small businesses, the majority of businesses in Quebec, are the causes of failure the same?

Yolande Côté, Information Highway Secretariat (IHS)

Among issues about the impact of the introduction of new technologies, an issue that was already being raised ten years ago was whether we can distinguish issues specific to the introduction of information highways. What specific effects will information highways have on organizational issues?

Réal Jacob, UQTR

With the introduction of information highways, the field of opportunities becomes larger, but the basic issues remain the same. We may think that information highways could potentially complicate the issue of the limits on what constitutes an organization. In hospitals, introducing distance supervision of an operation thus raises the question of liability for medical actions in the relationship between two organizations. Who is liable for the operation? The doctor and hospital where the operation takes place or the doctor and hospital where the supervisor practices?

Manuel Dussault, Alliance des manufacturiers et exportateurs du Québec (AMEQ)

The effects of current technological change are unpredictable. Some will be positive, others negative. This is the Schumpeter effect, creative destruction in economics. Ethical concerns must guide us in introducing any technological change; we must ensure that technology serves everyone's benefit.

Pierre Paquette, CNTU

- What opportunities are there in Quebec to apply the model the speaker proposed?

- In general, the best guarantees granted in collective agreements are the employer's obligation to inform staff of future technological changes; few employers provide training.

Réal Jacob, UQTR

- In his report on the status of collective agreements in Quebec, Michel Gratton pointed out that agreements are generally limited to a guarantee that the information will be communicated and to establishing regulations for advance notice. In addition, a study by Colin Gill on twelve OECD countries showed a strong trend developing toward management-union co-partnership in the discussion of these issues. This is the case, in particular, in England where management and unions sign technological agreements in parallel with existing collective agreements.

- A certain number of participants stressed the fact that technological changes can bring benefits to business. They can also, however, bring hidden costs (purchase of equipment too long to be installed or just bad purchases; changes in business culture that risk loss of qualified staff).

Josée Goulet, Forum Chair

Do we have to wait until the situation is ideal before introducing new technologies? Do we not risk delaying the moment of installation too long and losing any opportunity to remain competitive? How do we study the context for introducing new technologies in small businesses?

Réal Jacob, UQTR

Small businesses generally have an owner-manager. Training could be done on the job. The size of the business matters little, however; we can ensure the effects of change on the business are taken into consideration.

Philippe Arnau, Canadian Federation of Independent Business (CFIB)

The use of new technologies does not always lead to questioning operations. Many small businesses are established in advanced technology niches, and all the staff were hired with the required knowledge for the job. In such cases, which are very frequent, the use of new technologies does not create changes in existing jobs but rather creates jobs.

Jacques Boies, Chamber of Commerce of Metropolitan Montréal

Small businesses often need information on opportunities for new information technologies even before thinking about their effects. Medium-sized businesses must do awareness-raising work if the business is not specialized in advance technology. It is mainly very large organizations that are caught in business, even business culture, re-organizations.

Réal Jacob, UQTR

The penetration and success of technology are always tied to an effort to take the effects of introducing new technologies on the organization into consideration. Professional management teams owe it to themselves to ask these questions.

Michèle Guay, Centre de promotion du logiciel québécois

60% of our members are SMEs. For our members, the major problem is the issue of distribution of the software they develop. Because the market increasingly demands software that combines very different functions, producers now have to sell integrated products. For a firm developing software, the issue then becomes having its technology adopted.

Michel Doré, CNTU

- Consensus about the role of third-sector participants.

- The question we now have to ask is about the impact of these information technologies on employment. Information technologies can allow us to create jobs, but these gains are counter-balanced by a large number of jobs lost in other sectors. In addition, 20% of the work force is permanently excluded from the labour market. We therefore need structural solutions, for example, sharing work time.

Josée Goulet, Forum Chair

What demand is there for new information technologies? What desire do entrepreneurs have to generate business?

Monique Charbonneau, Centre francophone de recherche en informatisation des organisations (CEFRIO)

- One of the important issues if we want to generate business on information highways is the issue of electronic trade. If it were to be implemented generally, we would have to consider the interdependence of the various participants involved.

- According to our research, companies that want to do electronic trading must manage at least two types of communication, communication with clients and communication with governments that regulate their activities. We therefore have to consider standardizing these interfaces. Is that, however, always possible? In the government, is the single window possible?

André Bazinet, Conseil du trésor du Québec

Since March 1995, the Quebec government has introduced "committees on work organization" in every department and agency for discussion with personnel representatives in an in-depth review of the organization to find savings, improve services and maintain quality of work life. After a fairly long period becoming familiar with the approach and sharing information, exchange began on the basics in many organizations, so that these committees are becoming the preferred place for discussions of major projects such as telework; the structure for work schedules currently in effect was also developed by one of these committees before being applied

generally to the whole public service. However, this is a process that requires patience and support for committee members (needs analysis, training in principled negotiation and so on);

Yves Sansoucy, Centre de recherche informatique de Montréal (CRIM)

Need to consider human factors.

Josée Goulet, Forum Chair

Importance of pilot projects to assess the introduction of information technologies and the creation of opportunities to discuss the progress of these projects. At Bell, we asked the teams themselves to consider organizational adaptations for the introduction of new technologies. We select the projects that seem most effective.

New Work Arrangements and Organization related to the Information Highway

Presentation: Telework, an Emerging Phenomenon

Alain Pinsonneault, Associate Professor at the École des Hautes Études Commerciales (HEC) in Montréal, presented a report on the issue of telework. He defined telework as paid activity done outside the time-space framework by a member of an organization and identified four forms of telework:

- Home work;
- Work in satellite offices that are more or less subsidiaries of organizations;
- Work in electronic centres where many teleworkers rent and share the space and equipment needed for their duties;
- Portable work similar to a sales representative.

Telework, Alain Pinsonneault explained, is an emerging phenomenon that affects tens of millions of people. Growth of this phenomenon has been greatest in Great Britain. In Canada alone, there are more than half a million teleworkers, which as a fairly low number compared to other occidental countries. This phenomenon is mainly seen in large organizations (IBM, Xerox, Bell Canada, Treasury Board and so on).

According to an American study (1992), women telework most. In one quarter of the organizations studied, 100% of the women are teleworkers. In half the organizations, 70% of the women are teleworkers. In addition, the study shows that 54.6% of the women have young children. For women, the main reason for telework is to combine work and family life. For men, it is basically for reasons of savings, flexibility and a decrease in lost time for travel.

Organizations prefer telework for economic reasons, continued Alain Pinsonneault. It allows a substantial reduction in costs associated with office space rental. At IBM Canada, for example, these costs have been reduced by 55%. Telework also increases productivity and quality of work while reducing absenteeism and makes the organization more flexible by changing the status of workers. In this area, we observe an increase in contract workers instead of permanent positions. The flexibility makes teleworkers more satisfied and loyal to the organization.

For the teleworker, Alain Pinsonneault pointed out, the positive benefits are mainly greater flexibility in their schedule, increased independence, and a reduction of $3000 to $5000 in annual transportation and clothing expenses. Teleworkers consider themselves more productive because they are disturbed less often. They can also combine work better with family life.

As Alain Pinsonneault stressed, however, although there are advantages for the organization, there are also negative impacts:

- Risk of a decreased sense of belonging to the organization that translates into a loss of organizational synergy;
- Difficulty developing a business culture;
- Increase in management complexity;
- Difficulty in co-ordination, supervision and training of teleworkers to ensure succession.

For workers, the most definite negative impact is a feeling of isolation when they start their new role. Isolation can become a barrier to career progress due to their lack of visibility within the organization and limited development of their abilities. There is also a tendency to overwork to show the benefits that can be earned.

The success of telework requires clear vision on the part of the organization to develop a policy and a non-ambiguous contract for the acceptability, assessment and remuneration of work. From the outset, selected managers and employees have to be involved to train them and assign them appropriate duties to complete. Telework employees should be independent, motivated, well-disciplined and voluntary. The organization should offer them an adequate physical and technological environment. Finally, telework requires the establishment of a trust relationship between managers and workers. They must be assessed more on the results achieved than on the working process. When they are in central office, the organization must involve them in current activities to maintain a sense of belonging.

Presentation: Self-employment

Pierre Bertucat, director and editor of *L'Autonome* magazine, related his work experience and observations on a subject that is in style, self-employment. From the outset, he defined two types of self-employed worker: real and contingent. Unlike the teleworker, the self-employed worker is not on salary. Since 1970, Bertucat noted, this was the only segment of the job market that showed strong growth. A self-employed worker is not an entrepreneur in the generally accepted sense. In addition, more than 70% of self-employed workers have a university education.

"Real self-employed workers" choose their professional status. They refuse to be subject to an authority other than the client. They are characterized by a strong need for independence and difficulty working in a group. By the nature of their interests, they are always highly advanced technologically. They work a great deal, on average more than 60 hours per week and live with permanent professional insecurity. They must provide all aspects of social security for themselves. Among real self-employed workers are journalists, freelance photographers, lawyers, notaries, consultants and so on. By definition, they are institutionalized.

The other category of self-employed workers, continued Pierre Bertucat, is called "contingent." This includes individuals who become self-employed by necessity after they lose their salaried job. These self-employed workers are a "kind of hybrid" who, while self-employed, continue to look for a job. They basically live in a vicious cycle of searching for a contract and a position within an organization. They experience 60% to 70% failure in the first year of operation because they do not necessarily have the "temperament" for their new status. While the real self-employed worker is highly advanced in computer technology, the "false" self-employed worker may be well-equipped but often has insufficient mastery of this technology. "Very often, we have noticed that such workers have computers, modems and so on because their children introduce them to their use," said Pierre Bertucat.

There is an important distinction to be made between teleworkers and self-employed workers. From the union and legal point of view, teleworkers are not "self-employed" because they maintain a direct relationship with an employer.

Discussion

Telework has increased peoples' productivity by 40% compared to their performance within an organization. However, teleworkers' salaries have not followed the same rate of growth. Often, compensation is a performance bonus, but the "piece-work" formula for contracts between parties is frequent. This situation explains the drop in income observed among teleworkers. Unfortunately, a participant pointed out, there is very little data on this subject and its impact.

Most questions about telework and its impact on society are raised by union representatives. It was observed that telework mainly affects workers with poor or high job qualifications. There is doubt about the level of value attached to telework. Technology also requires more extensive equipment and more maintenance, often to the workers' detriment. The advent of technology has not always favored workers.

According to Alain Pinsonneault, technology only reinforces what already exists and follows the trend of changes in employment relations. He added that an adequate physical environment is one of the essential conditions for successful telework. The worker must be at ease with technology, and it must effectively meet the requirements of the teleworker's duties.

Pierre Paquette, CNTU

Is it a new strategy for organizations to dismiss (lay off?) poorly qualified employees by "sending them home?" In addition, the idea of a "false self-employed worker," an independent worker, may represent a violation of the Labour Code where the worker only has a more or less long-term contract. That is frequent when members quit their jobs and start working again doing the same work for the same organization but on a contract basis. In view of telework, some wonder if a "tele-union" is possible. According to Pierre Paquette, that exists.

Many participants pointed out that in telework, change is not only technological. We are faced with a new paradigm that is different in large and small businesses. In the case of large organizations, we talk about re-engineering when we re-organize work and relationships between members. Adel El Zaim, Information highway applications unit director at CRIM, explained that "small organizations want to embark on technological re-organization but are not necessarily able to do so, given the number of employees, particularly those with approximately 25 employees."

Using the introduction of financial institutions' automated teller machines as an example, some participants said they allowed financial institutions to offer or improve customer service. Technology should be used to improve services offered. Telework is part of technological change.

Measures to Promote Improved Working Conditions

Presentation

Jacques Desmarais, professor of legal science (Université du Québec à Montréal) and president of the Commission sur l'informatisation, l'emploi et le travail conference on electronics and computing (Quebec, 1985), believes that new communication and information technologies (NCIT) should lead to a review of some labour legislation.

Part-time, home-based, contract and self-employed workers have very limited, if not non-existent, protection in the current context. Labour legislation only really protects workers in a subordinate position to their employer. Once workers are really self-employed or independent, labour legislation does not apply either to facilitate the exercise of the right to union membership or to establish minimum working conditions such as work standards.

Changes in the employment sector are not really new. Already in 1985, in the work of the Commission sur l'informatisation, l'emploi et le travail, issues raised here were foreseen, issues about the impact of NCITs and the approaches to be implemented, such as the involvement of workers in the introduction of technological changes in businesses, work-force training (forecasting and planning, adaptation, retraining) and the reduction and scheduling of work time.

Proposed solutions in the discussion paper provided to participants are approaches to solutions that will be examined here in the following order:

1. Is a self-employed worker a salaried worker like any other?
2. What measures can be taken to reduce job losses?
   a. training programs;
   b. work sharing;
   c. gradual retirement for older employees;
   d. measures to promote portability of work.

With respect to teleworkers, the recent work that resulted in the Convention and Recommendation on Homework (ILO, 1996) should guide our reflection. This was a comprehensive and noteworthy effort to define a set of provisions that could be adapted to the situation of every country and is certainly worth embodying in Canadian legislation.

With respect to electronic surveillance, basic regulations for the protection of privacy are in conflict with businesses' desire to control the organization of work. Currently, legislation seems to allow recourse to electronic surveillance if it is exercised reasonably ("where circumstances require"); in addition, in litigation, when we want to use the product of such surveillance against a worker—or against anyone else—such evidence will be admissible if the court decides that its use does not bring the administration of justice into disrepute. It was therefore noted that the criteria chosen for authorizing electronic surveillance are vague and left to the discretion of the courts in a litigation situation. Few limitations have in fact been developed to ensure the protection of workers and the public.

Returning to the conclusions of the 1985 Commission sur l'informatisation, l'emploi et le travail, Jacques Desmarais pointed out that we must necessarily involve workers in the introduction of technological changes in businesses. Training is essential and should be planned to adapt work stations and retrain workers. Finally, in the case of restructuring work time, the government must serve as an initiating and support agent in establishing regulations for negotiating re-organization. We must also define regulations for proportional working conditions for salaried part-time employees.

Referring to the work of J. Rifkin (1995), Jacques Desmarais concluded that we have to reconsider the work week and define a new social contract. The government must have a new, more open role in the third-sector economy and in support of and recognition for volunteer work.

Discussion

There was consensus on the need to consider the worker as central to technological change for such change to occur in harmony and respect.

Lyne Fréchette, Association des journalistes indépendants (CNTU), said freelance journalists are, to a large extent, artisans of the development of information highway technologies "because it has a direct impact on our work." The rise of NCITs has, however, shared in the deterioration of working conditions. This explains why increasing numbers of self-employed workers want legislative protection to ensure that their work is valued.

Some participants suggested legislative protection for self-employed workers because their profession is "mistreated." Among the objections to legislative protection are "real self-employed workers," according to Pierre Bertucat. Jacques Garon, Conseil du patronat du Québec, said that it is "impossible to combine self-employment with the working conditions of a salaried employee" because of the very nature of self-employment.

"Our current reflection is guided by the example of actors who have succeeded in defining a minimum framework for their employment relations," said Pierre Paquette. It is possible, on this basis and on the basis of legislation such as the Status of the Artist Act, to define a legislative framework for the income and working conditions of self-employed workers.

Citing the Beaudry Commission on labour legislation, it was noted that there is a set of measures close to what we are discussing in today's forum "but that have remained inactive," said Michel Doré, CNTU. We will always come back to the same observations when confronted with changes in the labour market, traditional relationships that we have

to reconsider and labour legislation that is inadequate. In fact, all these changes, re-engineering, total quality and so on "work when unions are strong," according to the American experience. We have to find a formula for proposing basic approaches that could improve the situation and combine all the trends.

In an attempt to respond to job crisis problems, we have to think about finding ways to accelerate growth. We have to seek to create jobs by increased production. Currently, we are neglecting demand and counting too heavily on exports. At the end of the line, the increase in self-employment contributes to a global reduction in purchasing power. The increase in this type of employment is of concern in the current situation.

To be in a postion to assess changes related to NCITs, we have to be able to analyse the impact on job structure. Data on these phenomena is less and less available and valid. Empirical analyses allow us to forecast concrete terms and conditions for the implementation of planned measures.

It was noted that telework as an item for negotiation is part of a poorly defined process. We have to find ways to ensure valid negotiation when faced with change. We have to invent measures that facilitate worker mobility within the organization and change of status within the work structure.

"Tax incentives need to be planned to regulate the distinction between self-employed and employed workers," said Jacques Boies, from Services Drakkar, representing the Chamber of Commerce of Metropolitan Montréal. Tax incentives could help small organizations train their workers. This is all the more important because 75% of businesses have less than 20 employees, therefore do not necessarily have the means to undertake such training alone. Jacques Boies cited the example of Société québécoise de développement de la main-d'oeuvre (SQDM) programs.

Transfer of jobs to other functions is not happening. "There is a problem in corporate structure," said Philippe Arnau, economist with the Canadian Federation of Independent Business.

Technology and productivity can create jobs. This is true if there are outlets for products. There are limits to productivity. We have to create demand. We have to work on growth, develop a sectoral and regional dimension of employment within an overall strategy.

A proposal from the union sector suggested legislative protection could be an attractive solution to the extent that the legislative protection was sectoral. At the same time, we must be careful. Many self-employed workers fear that tax measures could become a trap. However, the appeal of legislative protection that would give real self-employed workers the ability to negotiate was recognized.

The idea of a sectoral agreement is poorly accepted by the business world, which "considers signing a contract with self-employed workers unacceptable," said Lyne Fréchette. She also cited the issue of respect for authors' rights.

Jacques Garon recalled that at the last economic summit in Quebec, agreement was reached on the statement that over-regulation was costly to business. Jacques Demarais therefore recommended "considering the possibility that partners more clearly define working conditions and what can be done to provide legislative protection for teleworkers."

"Together with the government, we should all review the issues of these new realities that mainly affect contractors," said Michel Doré. We have to monitor the new processes and regulations that are changing the world of self-employment.

Bernard Doddridge, CEQ, opened debate on relocating employment. It is difficult to separate the current discussions from the phenomenon of market globalization. Job losses here are primarily the result of the willingness to produce anything at lower cost elsewhere. Internationally, we are also seeing relocation of employment from countries previously preferred to countries where labour is less expensive today. This is the case with Japan, for example. Here, this debate translates "into relocating jobs from factory to home."

Josée Goulet, Forum Chair, considers it necessary to intervene at several levels, "like in a food chain." We need demand for new products and workers must be retrained. This could be done by intervening to change standards. "I am not sure we have fully exploited this potential."

One of the main points of discussion was training. Christian Payeur, CEQ, explained that training should not just be a tool for adaptation, because there is a long period between starting training and expected results. The goal sought may disappear along the way. "We have to review the role of training as a development factor in creating a more or less new market." Training should be used to plan for development, not reacting to the current situation, and could be used to develop new products. This is a new culture to develop within business and society.

The interdependence of individuals and society was recognized. This relationship can also be found between the various businesses in a region. We may thus see approaches to pilot projects developing new forms of co-operation and negotiation with employers. For example, a project underway in Saint-Jérôme shows that business can adjust to the school schedule for young part-time workers.

We have to find ways to develop a training culture that is a shared responsibility between business and employee. "There will be a great deal of deregulation in many sectors that will have great impact on society," said Suzanne Gadbois, Conseil du Trésor du Québec. Everyone, all of society is involved in the process of handling change and validating proposed measures in the field.

Consensus was reached among work partners about training components, which are what should make change operational and maintain leadership in job changes. There should be a single training network that includes Human Resources Development Canada (HRDC), the Quebec employment department and the Société québécoise de développement de la main-d'oeuvre (SQDM). This is important in the development of a training philosophy that can be adapted to every employment sector. We do not want too much government intervention in the process.

One participant said change is being discussed reactively, while new technologies are active. He proposed developing a creative national plan to begin on a level playing field in the introduction of new technologies.

Manuel Dussault, Alliance des manufacturiers et exportateurs du Québec, recognized that there was a lack of statistical data on the reality of employment facing NCITs. In the changes, we have to rely on employees, as many businesses are doing to manage environmental problems in their organization.

The idea of reducing retirement age was not unanimously accepted as a solution to the employment problem. For one thing, "we would pay an incredibly high price for compulsory retirement because that has not benefited young people," said Jacques Garon. Also, it was noted that many healthy, skilled retirees rejoin the work force as "consultants or contractors" to the detriment of young people. "I am not convinced that can solve the employment problem."

In concluding the discussion, Josée Goulet said that we have to recognize third-sector economics "to value the many workers who may be active in this sector." This is a cultural component that is developing significantly in Europe.

Summary of Regional Forum Discussions

Josée Goulet, Forum Chair, presented the following draft summary:

Social and Organizational Impact

The social and organizational impact of the introduction of new technologies must be taken into consideration. For that purpose, it is necessary to develop:

- awareness raising, empowerment, information and training efforts;
- new practices (in management and negotiation);
- government support programs (for example, for unions and other groups).

Success in introducing new communication and information technologies (NCIT) requires participation from the outset by all stakeholders.

Introduction of the following measures is necessary to protect jobs affected by NCITs, to support workers and to develop and create new jobs:

- promoting NCIT ownership by businesses and the public by facilitating equipment purchases;

- training to develop an appropriate culture for NCITs (not only technical training, but also a knowledge set that facilitates mastery of the issues related to NCITs, based on the needs of workers as employees and members of the public;

- developing pilot projects and supervisory forms (sectoral and geographical);

- publication of strategic information on the economic, social and organizational impacts of NCITs (by Statistics Canada, technological monitoring groups, groups formed for this purpose within the framework of government incentive measures);

- structuring work schedules on a negotiated basis;

- national plan to stimulate NCIT development;

- recognition of the third-sector economy.

Self-employment

There must be a commitment to study the specific issues of self-employment and a willingness to find solutions for legislative protection of self-employment and new work arrangements, such as telework.

Virtual Trade

We must review the impact of virtual trade on small- and medium-sized business and self-employment and promote accessibility to virtual trade for these groups.

French Content on Information Highways

We must encourage the development of French content on information highways.

Globalized Reflection

We must extend these interventions and analyses to the international level.

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Collective Reflection
on the Changing
Workplace

Réflexion collective sur
le milieu de travail
en évolution

National Forum

The Information Highway and
Workplace Issues:
Challenges and Opportunities

Ontario Report

Agenda

Toronto Site — Toronto Hilton Hotel
Governor General's Suite, 145 Richmond Street West
Friday, February 21, 1997

08:30	Registration
09:00	Welcome and Introductions

Chair — **Alexandra Dagg**, Member of the Minister's Advisory Committee on the Changing Workplace
Eugene Harrigan, Associate Executive Head - Human Resources Development Canada - Ontario Region

09:15	The impact of the Information Highway on the Workplace
	Panel — overview of the issues

Robert Wright   (Toronto Star, Editor of Fast Forward)
Prof. Jerry Durlack (York University)

10:00	**Break**
10:15	Small group discussions
10:45	Report back from groups to all participants
11:15	Discussion in plenary
12:00	**Working Lunch**
12:30	Panel — New approaches to work

Allyson Hewitt, Executive Director - Metro Community Information Centre
Ric Irving, Assoc. Dean - Schulich School of Business
Janet Salaff, Centre for Urban and Community Studies

13:15	Plenary Discussion
13:45	**Break**

Agenda (continued)

14:00	Speaker — Worker protection
	David Robertson — Canadian Auto Workers Research Director
14:30	Small group discussion — The future role of government in worker/work protection
15:15	Report back from groups to all participants
15:30	**Break**
15:45	Regional perspectives discussion with participants

a) GTA
b) urban/rural development
c) health and safety
d) equity

Our regional themes include cultural diversity, electronic infrastructure in urban & rural development and Ontario's Industrial structure

16:15	Summary remarks by Chair
16:30	Adjournment

Welcome and Introductions

Eugene Harrigan, Associate Executive Head, HRDC, Ontario Region, introduced the chair of the forum, Alexandra Dagg, a member of the Minister's Advisory Committee on the Changing Workplace. Dagg welcomed participants and explained that the forum is a response to the Information Highway Advisory Council (IHAC) report "The Challenge of the Information Highway", and its Minority report recommendation to convene a national forum. Dagg provided additional background on the forum and its mandate, and introduced the co-facilitators, Liz Rykert and Malcolm Shookner.

Dagg reviewed the agenda and said that the seating arrangement was intended to facilitate communication between different communities, as later sessions of the forum would involve small group discussions. There was a brief round of introductions, after which Dagg introduced the speakers. Robert Wright is a journalist with the Toronto Star, and editor of the column "Fast Forward,"; Jerry Durlack teaches at York University.

Wright told a little about himself and described his Internet-related column. After briefly surveying the history of the Internet, Wright went on to discuss the "media hype" surrounding it, saying the media had first given the Internet too much positive coverage, and then vehemently negative coverage. Society is at a juncture where the Internet can be discussed in a more objective way, said Wright.

> *"My feeling is that we're in the early stages of a 10- to 20-year period in which the adoption (of information technology) will be somewhat slow and incremental, not radical and convulsive as some people predict."*
>
> Robert Wright, Editor of **Fast Forward**, Toronto Star

Wright cited three important issues: capacity, speed, and infrastructure. He said the vast majority of modems and telephone cables being used are too slow to fully realize the audio and video potential of the Internet. The necessary equipment, including fibre-optic cable and satellites, would not be financially viable or profitable for the business community to develop or provide, said Wright.

Wright also complained about the financial barriers to Internet access. He pointed out that costs which block access for many lie in not only modems and computers, but also in acquiring service.

The material and information on the net is not compelling enough to attract and retain users, Wright continued. Hailing the Internet as a unique technology with overwhelming potential, Wright explained that he is disappointed with the current tendency to view it as a "vast virtual shopping mall." In closing, Wright said that he believed the Internet would be an enduring medium in the future, but that change in the workplace would be a slow process.

Jeremy Durlack opened his presentation by agreeing with Wright on the need for easy access to the Internet and for compelling content. Durlack then introduced his own work and listed many research groups developing new technology for the Internet.

Durlack's entire presentation was accompanied by computer-generated visuals projected onto a screen. During the presentation, Durlack demonstrated video-mail capabilities, as well as short digital movies. In one of these movies, two dancers in two different locations were featured. Another movie featured a graphic designer describing the role of designers in the Internet, and user-friendly interfaces.

Durlack described research and development groups involved in the development of a more symmetrical network (i.e., both providing and receiving information); of more powerful server farms featuring MPEG video capabilities, faster information retrieval and CD-ROM accessibility; designs for telework; financially accessible "homes"; on-line peer-to-peer learning; and the development of guidelines on intellectual property.

Throughout his presentation, Durlack stressed the need for co-operation between related communities -- computer developers, business interests, educational institutions, the media, and government -- to work not only to identify how the Internet should be developed but to ensure that the necessary changes and efforts are made to facilitate the attainment of that goal.

Small Group Discussions

After a brief refreshment break, facilitator Malcolm Shookner explained the procedure for breaking into small groups. He told participants each group would have a notetaker to present a summary of their discussions to the plenary and that a member of the Regional Planning Committee was in each group to support the process and answer any questions they might have.

Facilitator Liz Rykert introduced and reviewed four questions upon which the small groups should focus discussion:

- What am I experiencing in my life, in my community and at my workplace as technology becomes an increasingly important tool?

- Am I trained to meet the challenges ahead?

- Who are the key players affecting the development and introduction of information technology in the workplace?

- What are the appropriate roles for government, business and labour in adjusting to the spread of information technology?

Participants broke into five small discussion groups for about 45 minutes. After the discussions, Shookner asked for a representative of one of the groups to present a summary of their discussions.

Small Group Summaries

A representative of Group Four said their discussion had centred around personal experiences with new technologies, especially personal health issues like carpal tunnel syndrome, aching backs and eye strain. They concluded that problems arising from technology tend to be viewed as "individual problems," but stressed that they should be seen as "societal" problems to be borne and dealt with by society in general.

The group reported that they were concerned with "who's driving the bus." That is, they complained that control over new technologies is now focused in the hands of "CEOs and bean-counters," rather than being addressed by policy-makers through broad consultation with all involved parties.

Group Four identified a series of "quality-of-life" issues arising out of the use of new information technologies which included: losing the social aspects of work; transferring the responsibility for and expense of training from business to the individual; increasing job-related stress disorders, especially from isolation; and the segmentation of people from their communities and one another.

A representative of Group Five told participants they agreed that technology, as a rule, replaces labour, so "accelerated technological change results in a 'jobless-growth' society." Continued unemployment and underemployment were cited as growing problems resulting from technology and several trends were identified: toward home-work and part-time work; a migration of jobs out of the country, and a shift away from low-skilled jobs toward jobs requiring higher levels of technological competence. The group stressed the need to understand these shifts and their impacts from the perspective of workers, rather than just business, in order to "move forward."

Group One reported that their discussions did not begin with the basic assumption that technology was necessarily labour-saving. They commented that technology sometimes accelerated the need for support people. Group One also identified problems for workers arising out of technological advances: an extended workday, blurring the boundaries between work and personal life; loss of job security; increasing demands on workers; shifts in responsibilities for costs of training and equipment; and the polarization of workers and workplaces into high and low-technology industries.

Group Three said they had concluded that technology created high expectations for speed, but that increased speed does not necessarily equal higher quality work output. They agreed with other groups about the proliferation of health and stress-related illness resulting from the implementation of technologies, and added that these should be viewed as hidden costs of the technologies. They also expressed concern that downsizing will ultimately result in the loss of valuable corporate memory, experience and knowledge which could be damaging over the long term.

A representative of Group Two said they had found the process of the forum useful but saw the need to expand it to include the "shop floor," like teleworkers and others directly affected by new technologies. Group Two also identified the need for the Federal and Provincial governments to "move with proper legislation" to deal with issues relating to work standards, especially respecting teleworkers and home-workers. As one member of the group was deaf, issues relating to disabilities were discussed in depth. It was stressed that the totally different experiences that people with disabilities have with new technologies must be taken into account.

Shookner thanked participants for raising critical issues, and invited general comments from the floor.

Discussion

Tom Baker called the Forum's attention to a recent article by economist Pierre Fortin, which suggested that between 1990 and 1996 actual productivity in Canada had fallen. He asked about the implications of this decline.

CAW Research Director David Robertson said that over the period mentioned, companies focused more on cost-cutting, reorganization and downsizing than on technology. He said "productivity per capita has increased astronomically; fewer of us are making more but there are substantially fewer of us." He added that "farming out" is actually causing lower productivity as well.

Mark Hopkins, Director of Technological Development for the Municipality of Metropolitan Toronto, told participants that business benefits of large technological applications are "not realized at all or very slowly." He added that we seldom see true benefits because business investment is always expanding in order to "stay on top" of expanding technologies. Hopkins also stressed the need to address "racial, income and ability" issues.

Colin Laine, an educator from the University of Western Ontario, echoed the need to provide for special training, especially since technology is changing so rapidly. He told the participants that, although he was deaf, he was able to participate in the new technologies. He focuses on teaching others who have various physical, educational and social "impairments."

In addition to polarizing workers into high and low-skilled jobs, Richard Long of the Communications Energy & Paperworkers Union said, we're also creating a distinction between those who have too much work and those without enough. Long added that there "are limits to what we can do when we are exhausted and overworked."

Vicki Smallman, a representative of the Canadian Federation of Students, told participants that the line between education, training, and work is being blurred in our education system. This raises issues, she said, about whether or not people are being paid

for work they perform as students and blurs the boundaries between work and school. It is necessary, she stressed, to determine what our educational system can do to respond to issues arising in the workplace.

Janet Salaff from the Centre for Urban and Community Studies at the University of Toronto, agreed there is a blurring of boundaries between students and workers, and between work and personal issues. She added, however, that this blurring can be used to enhance, rather than harm, quality of life by giving people more flexibility, allowing them to spend more time with their children and to deal with personal issues.

Laurel Ritchie, National Representative of the CAW, said she foresaw the privatization of education and training, as "all levels of government are abandoning their roles." Employers, she added, are "not picking up the ball," forcing workers to pay for their own retraining in "dollars, time and quality of life."

Independent Research Associate Jennifer Stephen cautioned participants not to ignore "the critical gender dimension." Leisure doesn't mean the same thing to women as men, she said, because women are already stretched with a double work burden and little leisure time to begin with.

Chair Dagg presented a personal anecdote about home-workers (primarily Chinese women) in the garment industry with whom she works. She said home work created unacceptable health and safety risks for the whole family, and stressed that unfair blurring between work and home life must be ended.

Panel: New Approaches to Work

Dagg introduced the members of the panel, Allyson Hewitt, Janet Salaff and Ric Irving, explaining that they would be discussing case studies and examples of the utilization of the Information Highway in the Workplace.

Allyson Hewitt presented information from her workplace at the Metro Community Information Centre (CIC). Hewitt said that the Metro CIC has, in conjunction with the Department of the Solicitor-General, partnerships with such groups as the Street Hotline, a peer hotline for young people living on the street, and the Victims Infoline. The Metro CIC also publishes the Blue Book, which lists over 3,200 government and community groups, Hewitt said. She told the group that the CIC's database is accessible by modem. Hewitt declared that she was committed to information technology because it improves customer service, assists in advocacy, aids professional development, reduces costs, and helps cope with increasing demands using decreasing resources. She added that information technology also allows the workplace to be adapted to people living with disabilities.

Hewitt asserted the definition of an educated person has changed from a person who possesses knowledge to a person who can get information.

After listing the various tasks required to produce the Blue Book, Hewitt reported that much of it is automated through computer technology. The Metro CIC also has an automated information referral system with the Solicitor General, she said. Hewitt closed her presentation by acknowledging that information technology also had its drawbacks, citing the declining listening skills of Metro CIC workers. The human element is still crucial, insisted Hewitt, for addressing issues such as language and customer service.

Janet Salaff of the Centre for Urban and Community Studies opened her presentation by saying working at home is empowering. Telework, at the managerial and administrative levels, Salaff said, enables greater control in the lives of workers. The structure of the workplace no longer reflects work itself, she observed, adding that the focus has shifted to fast-moving information.

Salaff said that the appropriateness of home-work was dependent on the type of work involved, with sequential work and information gathering -- as opposed to reciprocal work -- being most suitable for home-work.

Home-workers have more control over their time and workspace, improving their quality of life, said Salaff. In closing, Salaff urged employers to consider the type of tasks assigned to home-workers, as well as to communicate with employees to determine the suitability of individual employees for home-work.

Ric Irving, Associate Dean of the Schulich School of Business at York University, said that the title of his speech - "Cyberfriends Won't Jump-start Your Car" - illustrated his point that, although the Internet has facilitated the development of communities, it is often "hyped" in the media. Irving said the structure of the Internet should be determined by the work force and their representatives - unions - as opposed to the business community. The role of academia should be to observe and facilitate discourse on the Internet, he added.

Irving likened the Internet to an Information Ocean as opposed to an Information Highway, suggesting Information Ocean to be a more suitable metaphor as the Internet is non-linear and difficult, if not impossible, to control. Government regulation would be "fruitless" said Irving, as the structure of the Internet itself defies regulation.

Irving closed his presentation by addressing the issues of training and education. He strongly recommended that technology be relevant to today's needs. Irving also warned that technology without the resources to maintain, update, and operate itself is useless.

Rykert then opened the floor to questions and general discussion. The main themes of the discussion session were regulation, accessibility, and responsibility. Representatives of community groups expressed great concern about accessibility issues and the regulation of telework, asking the telephone companies to take responsibility for bad business practices as they are the line providers. This comment sparked a lively debate

about responsibility for technology and accessibility. Participants from various communities agreed that "thoughtful regulation" would be helpful, but were unable to agree on a definition.

Worker Protection

David Robertson
Canadian Auto Workers Research Director

Canadian Auto Workers Research Director David Robertson prefaced with the observation that we are at a critical historic conjuncture. He cautioned participants that, "the outlines we see in the closing years of this century will actually be the contour and pattern of the next."

Thinking about worker protection, he said, involves focusing on consequences, such as the process of technological development, the need for technological alternatives, the relationship to technology, and how power and politics shape technology. Robertson identified three faulty sets of assumptions that, he said, impede our ability to "shape a future where technology serves the collective good. The assumptions are: that a lower deficit will lead to lower interest rates which, in turn, will result in the creation of more jobs; that more profitable corporations will create more jobs; and that technological advances necessarily mean social progress. Each of these assumptions, Robertson said, has been proven to be untrue.

> "To approach technology differently requires us to shift our framework and begin to structure the debate about technology differently. I think the starting point is to recognize that technological change is a political process. That structures of power and authority influence the range of technological alternatives and the choice of technologies in organizations and in society."
>
> David Robertson,
> Canadian Auto Workers

Rather than jobs, he argued, deficit reduction has created high unemployment, lower wages, and labour market de-regulation. Higher corporate profits have been invested not in job creation but in "job destroying technologies and managerial strategies of casualization and work-intensification." And finally, while technology is indeed a "potent catalyst" for social change, we have yet to determine whether or not these changes are for the good.

Robertson cautioned participants to remember that technological change is ultimately a political process and should not be treated as an objective one. It is necessary, he added, to provide resources to those with less voice in the technology policy debate to enable them to participate meaningfully.

Robertson also identified the need to expand the influence of unions around issues of technological change, allowing them to negotiate shorter work hours, technology buy-outs, effective re-training, and the establishment of the principle of work ownership.

Finally, Robertson criticized the Federal government for its own employment practices, accusing it of accelerating casualization, contracting out, "and the transformation of public work into low wage and insecure jobs... If we can't expect anything different from the private sector, our future is in jeopardy," he concluded.

Small Group Discussion

Before breaking again into small groups, Rykert asked participants to address questions from the morning that had not been adequately dealt with, and presented a new set of questions relating to the role of government in addressing workplace issues arising out of technological advances:

1. What are the responsibilities of individuals in adjusting to the changes resulting from the introduction of technology?

2. What does the business sector gain by using information technology?

3. What is the most appropriate role for unions at a time of significant adjustment to the introduction of new information technologies?

4. What role should government play: to protect workers affected by technological change, to foster workplace adaptation to technology, or to assist management and labour address adaptation issues?

Several participants told Rykert it would be difficult to arrive at consensus on most issues or on specific recommendation to bring forward. Rykert said there was no need for consensus, just a broad determination of what "the burning issues" are in this area.

Small Group Summaries

Group Four reported that their discussion began by calling into question whether or not there are benefits from the new information technologies, and whether those benefits are experienced equally by all people. They identified the need to avoid entrenching pre-existing cultural inequities, stressing that, while technology is neutral, its application may be either positive or negative and vary among individuals. They recommended that the government require "technology assessments," similar to environmental assessments, which would take factors such as race, culture, ability and poverty into account and assess the potential adverse effects of new technologies on work culture.

The group recommended that unions be empowered to organize home-workers, and stressed that governments are capable of either enhancing or diminishing the roles of unions. They also stressed the need for unions to negotiate technology clauses and train union stewards and staff regarding technology-related issues.

Finally, Group Four identified three mechanisms at the disposal of the Federal government to address the issues raised: using inter-provincial trade agreements to force provinces to beef up minimum standards; doing technology-based research similar to that conducted in the past by Labour Canada, and introducing "tripartite co-determination" similar to the system found in Scandinavia.

Group One stressed the need for key players - business, government and labour - to develop a comprehensive framework. They stressed the need to update the Canada Labour Code and the National Childcare program to address issues raised by new information technologies. They also stressed that training and technology programs need to be "comprehensive and cross-sectoral," and that the Labour Code must be enforced.

Group Three said they began by examining the guiding principles which prompted the forum and asked themselves, "how can we make every highway and byway available to everyone?" They identified the need to address race and cultural issues, and rural vs. urban access issues. The group also recommended legislating a tax levy or incentive to encourage training for workers facing technological change. Finally, Group Three recommended mandating a shorter work week which, they said, would address health and safety concerns, create jobs and improve productivity.

Group Two echoed many of the earlier group's comments. They also identified the need for the Federal government to adopt the recommendations of the International Labour Organizations on telework, and stressed the need for the Federal government to be a "national model" as an employer, avoiding casualization and contracting out. Finally, the group stressed the importance of collaboration and empowerment, recommending that websites be used as "moderated management training services."

Group Two reported difficulty arriving at consensus on any recommendations, but offered the following set of "important questions" for consideration:

- Should employers be allowed to use technology to cut wages?
- Should workers have a say in technological design and choice, and at what point?
- Are these really new issues or just revisions of old ones?
- Does regulation have an impact on competitiveness?
- Is there a risk of employers moving if we over-regulate?
- Who is responsible for retraining workers displaced by technology?
- Should government mandate a per capita training budget?
- Should we require that the introduction of new technologies be job-neutral (that is, that there be no job loss, except by attrition)?

Concluding Remarks

After a brief break, Dagg told participants that the discussion of regional concerns would be canceled due to time constraints and that many of those issues had arisen during general discussions. She told participants a copy of the final report on the forum would be available to them, and that a synopsis of the first day's discussions would be available on Day Two of the Forum. Dagg presented a brief summary of the small group discussions, identifying overlapping themes and acknowledging that, while there was sometimes broad agreement, there were often widely divergent views.

Some participants objected to the cancellation of the Regional Issues discussion, particularly in light of the Ontario government's current restructuring and downloading of services. Other participants stressed the need to discuss rural issues, and the special needs of the North. Participants argued that the amalgamation of school boards and the establishment of the Toronto "megacity" would have profound effects on access and education.

Dagg acknowledged the importance of these issues and suggested that a recommendation be made to the Minister that further opportunities are needed to address these and identify other important issues with more time for dialogue and consideration. A participant suggested the forum should insist the issues be dealt with within the next month since input needs to be channeled quickly, because of the time frame within which huge structural changes will be occurring in Ontario.

Dagg encouraged as many participants as possible to attend the closing session tomorrow, thanked participants for coming and adjourned the meeting.

Participants

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Joan Bush
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Collin Gribbons
Union Communications

Mark Hadfield
Bold Internet Solutions Ltd.

Ross McMaster
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Ginny Molyneux
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Wendy Cukier
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Catherine Henderson
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Mark Hopkins
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Andy Ranachan
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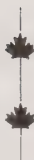
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Collective Reflection
on the Changing
Workplace

Réflexion collective sur
le milieu de travail
en évolution

National Forum

**The Information Highway and
Workplace Issues:
Challenges and Opportunities**

Prairie Report

Agenda

The Ramada Inn
708 8th Avenue SW Calgary
Friday, February 21, 1997

08:00	Registration
08:15	Welcome and Overview of the Issues
	Chair — **Mr. Andrew Sims** Advisory Committee on the Changing Workplace
08:30	Human Resources Development Canada **Mr. Russ Brown**, Regional Director General, Alberta/NWT
09:00	The Human Impact of the Information Highway on the Workplace
	Net Income Stabilization Account, Agriculture Canada Speaker — **Mr. Danny Foster**
	Communication, Energy and Paperworkers Union Speaker — **Mr. Ron Carlson**
	Discussion
10:15	**Break**
10:30	New Approaches to Work that Utilize Information Technology
	PSAC Alternative Work Environments Speaker — **Carey Barnowski** Telus Communications Edmonton Speaker — **Donna McWilliams**
11:00	Information Highway Opportunities
	AVL Automatic Vehicle Locations Systems Speaker — **Tom Lockhart**
11:15	Small group discussions

Agenda (continued)

12:00	**Lunch**
	Guest Speaker — **Professor Bob Russell**
	Department of Sociology, University of Saskatchewan
13:15	Small Group Reports
13:30	The Challenge: Working to Ensure Worker Protection
	Alberta Federation of Labour
	Speaker — **Lucien Royer**
14:00	Small group discussions
14:45	Small Group Reports
15:00	**Break**
15:15	Plan Prairie Regional Forum presentation to the National Forum
	Video conference on Saturday, February 22nd
16:15	Closing remarks — **Andrew Sims**

Welcome and Introductions

This Prairie Region Report is compiled for two purposes. It will provide participants of the Prairie Region with a record of the event, a reminder of the debate that occurred and the desire of all parties to gain an understanding of the impact of information technology on the workplace and workers. The Prairie Report will also be included in the National Forum Report. The National Report will be provided to the Advisory Committee on the Changing Workplace as part of their work on the *Collective Reflection*. As well, the National Forum Report will be used by the Information Highway Advisory Council's "Steering Committee on Lifelong Learning and Workplace Change," in its presentation to the *Collective Reflection*.

What events preceded the National Forum?

In 1994 the Federal Government, in its commitment to develop a Canadian strategy for the Information Highway, established the Information Highway Advisory Council (IHAC). The work of the Council was guided by three objectives:

- creating jobs through innovation and investment in Canada
- reinforcing Canadian sovereignty and cultural identity
- ensuring universal access to the Information Highway at a reasonable cost

In 1995, the Council released its report, "Connection, Community, Content: The Challenge of the Information Highway." Included in this Report were recommendations for Federal Government regulatory and policy development. However, the sole organized labour representative, Mr. Jean Claude Parrot, of the Canadian Labour Congress felt that the Council had not fully addressed the issue of the impact of the information technology on employment and the workplace, and prepared a Minority Report (which was included in the IHAC Report).

In response to the IHAC Report and the Minority Report, the Federal Government published, "Building the Information Society: Moving Canada into the 21st Century." Essentially this document laid out the Federal Government's agenda to facilitate Canada's transition to an information society and knowledge economy. One of its responses to the IHAC Report was to convene a national forum to "examine the challenges and opportunities presented to the Information Highway with respect to the workplace" and to ensure that such issues as impact on employment, skills and training, and labour standards received wide public discussion. To fulfill this responsibility, the Advisory Committee on the Changing Workplace, created last August by Minster Alfonso Gagliano, planned the National Forum on the Information Highway and Workplace Issues, in collaboration with organized labour and business representatives.

How was the National Forum planned?

The agenda for the National Forum was developed by the National Forum Planning Committee, comprised of representatives of the Advisory Committee on the Changing Workplace, the Canadian Labour Congress, business, the IHAC Secretariat, and the Department of Human Resources Development Canada - Labour Branch.

To ensure that a regional perspective was included in the national forum, six regional fora were organized by regional planning committees. The regional planning committees were responsible for:

- identifying participants who would be invited to the National Forum, including representatives from labour, business, government, and academic;
- logistical planning;
- selecting relevant research, case studies, etc. that would illustrate the impact of information technology on sectors within their regions.

All regional fora convened on the same day (Friday February 20), and discussed the three major themes identified by the national Planning Committee:

- the impact of the information highway on the workplace
- new approaches to work that utilize the information technology
- ensuring worker protection

On the second day of the National Forum, all sites were joined together using video conference technology. A report of the second day's video conference will be included in the National Forum report to be distributed to all participants.

The Prairie Forum

The Prairie Forum was responsible for the largest geographic area and included Manitoba, Saskatchewan, Alberta and the Northwest Territories. Calgary was chosen as the Prairie Forum's host city. Due to the traveling expenses Prairie Forum participants would incur, the Prairie Planning committee restricted invitations to 30 nominees. The Prairie planning committee determined that invitations would be extended to three labour, three business, and three academia, government or non profit agencies in each of the three provinces. The Northwest Territories was represented by one labour, one business and one government participant. Of the 30 committed participants, 27 attended the forum and three sent last minute regrets.

The Prairie agenda was true to the mandated discussion topics. Where the Prairie forum deviated was to stress the *'human'* impact of the information technology on the workplace. Also, one presentation provided an example of Information Highway *Opportunities*.

As previously stated, the national forum was convened to "examine the challenges and opportunities presented to the Information Highway with respect to the workplace." Although, the time allocated for an in-depth discussion was too restrictive, the Prairie Forum met this objective. It was acknowledged that every heading on the agenda could generate a week long forum in its own right.

Notwithstanding the restrictive time frames, the Prairie forum participants, generated animated discussion concerning workplace (and worker) issues and offered solutions. For some of the participants, this was their first opportunity to share their ideas and concerns for the workplace across traditional lines of communication. This in itself is a mark of success.

The workplace which is no longer 'time and place' dependent, workers called a myriad of names such as full time, part time, contractor, business in all its shapes and sizes and how governments and society allow information technologies to impact these, will continue to be a key discussion topic in the future. The debate is just beginning to be included in our schools, at the workplace and in our publications.

Maclean's March 31, 1997 edition includes an editorial by Charles Gordon titled "Piano lessons, bird watching and golf". Although the title of his editorial may appear unrelated, Gordon writes...

> *Yes, there are labor-saving devices, and they are probably saving more labor than was ever imagined by the futurists of the past. But no one realized then that technological progress, in the form of cell phones, faxes, photocopiers, high-speed printers and, particularly, computers would create more work for people, making their days longer, not shorter. And at the same time as more work was being created, more jobs would be eliminated.*

> *The futurists of the past also failed to recognize - for how could they?-a distinct change in the ethic of the workplace. The mutual loyalty between employer and employee disappeared. Whether it was the unions making demands that threatened the survival of the company, or the company developing an obsession with the bottom line, the old idea of loyalty within a company has been shown to be an old idea, as outmoded in government departments as it is in private companies.*

> *Those who remain [in the workplace] are diversifying their psychic portfolios. They need the job, but they recognize that it can no longer satisfy them. Furthermore, they are leery of investing their entire sense of self-worth in the workplace, lest the workplace reject them, and leave them with nothing. They spread their emotional commitments around. If it is not going well at the office, there is always the piano. Or the novel. Or the church.*

The main hope for reversing this trend, bad is it might be for the piano teachers of Canada, is for employers to recognize that they need the thoughts and abilities of those who work for them-that a workforce is more than just something that needs to be reduced. Until that happens, the bosses shouldn't be surprised their employees' thoughts are elsewhere.

To read Gordon's complete editorial, visit the Maclean's web site http://www.canoe.ca/macleans

The dialogue necessary to explore the impact of information technology on the workplace is in its infancy - more detailed and structured analysis is needed. Similar to the National Forum, future discussions should facilitate open communication between all workplace partners. Open and informed dialogue is the key to making the best decisions surrounding society and work.

To assist the Prairie participants in continuing the dialogue, the Prairie Forum report comprises:

- introduction;
- Andrew Sims's summary presentation on day two;
- detailed notes of day one's presentation and ensuing discussions;
- Bob Russell's luncheon presentation;
- the agenda and Prairie forum participants list as well as the biographies of presenters.

To promote further discussion with friends and colleagues, the Prairie Forum Report on the Information Highway and Workplace Issues is being provided to participants in hard copy form, as well as in disc format.

Mr. Andrew Sims, Chairperson
February 21 & 22, 1997 - Calgary, Alberta

Summary of February 21, 1997 Prairie Forum Discussions
Presented to the National Forum via video conferencing February 22, 1997

We experienced a sincere willingness by all parties to discuss and resolve the issues raised by information technology on workers. While people have different perspectives, what is significant is the willingness to debate the resolution of the issues. "We got past the whether and reached the point of how." All stakeholders appeared to recognize these changes impact on everyone.

As directed we discussed the three main topic areas:

- The Impact of the Information Highway;
- New Approaches to Work that utilize information;
- Worker Protection.

So, what did we agree upon:

The Impact of Information Highway

First of all, we focused on the **Human** impact of the information highway.

This is because:

- we are talking about work as a human, not just a technological process;
- There was a recognition that technology is a tool for achieving human aspirations, and ideally, the technology must fit the worker and the job to be done. Technology is not just an end in itself, to be pursued just because it can be done, regardless of its human value.
- We generally kept our focus on the workplace, avoiding the almost infinite scope of technology's impact on society at large.

Indeed, while there was a recognition of the fact that the challenges posed by technology have national and even global implications, there was a countervailing recognition that the issues we face must be handled in bite sized pieces lest the scope of the issues overwhelm our ability to deal with them.

1. Everyone agreed the nature of Work is Changing:

    - Work is less secure. Employees recognize they can no longer rely on staying with a single employer. Practices like outsourcing and right sizing, while greeted in some quarters with less than enthusiasm are recognized as a present day realities.

    - Work is becoming more contingent.

    - Despite vestiges of old style management, there is a general trend to flattened management and less hierarchical organizational structures.

    - Workplaces are increasingly less time and place dependent.

While participants recognized that these things can create opportunities, which I will review in a moment, there was also concerns raised about the ability of technology to be used for monitoring employees. There was also concerns raised that technology can cause the loss of jobs, and that, of the jobs it does creates not all those jobs are 'good' jobs. We did not agree on the percentages of good versus bad new jobs, but then beauty is in the eye of the beholder.

2. Technological Limitations:

    - pace of change is escalating.

    - we talked about adaptability:

        - currently the worker often needs to adapt to the technology not vice versa.

        - ideally the tool or technology should fit the worker and the task.

        - However, new technology is just that, NEW - and we must recognize that it does not always emerge with its user friendliness fully developed.

        - The key idea was that employers should try to be sensitive to user needs and develop technology through consultation and with worker friendliness in mind as much as possible, consistent with the needs of the consumer and the emerging capacity of the technology.

    - There was concern expressed over the variety of and lack of compatibility between delivery platforms. This reduced the portability of training and added frustration to the switch to new technologies.

3. Training/Retraining Needed:

- No one had any difficulty accepting the need for life long learning.

- The issue we debated was over availability of training and the allocation of costs. (financial & non balance sheet intangible costs) this includes loss of worker loyalty, corporate memory, cost of hiring replacement staff and so on.

  - lack of consensus who is responsible for paying the costs.

  - We debated the difference between responsibility for initial training versus retraining costs, some suggesting this remained significant and others suggesting that the differences only touched on who should absorb the costs, whether it be employer, employee or government.

  - costs of learning must be managed differently, for example part time students do not qualify for loans. Our concern was that a learning culture required equitable access.

  - We discussed the need for rewards to encourage employers to support the creation of employment and retraining, i.e., tax incentives or benefits.

- sectoral initiatives for training need to be established

New Approaches to Work and Their Opportunities as a Result of the Information Highway

We heard from two presenters where workers and management worked collaboratively to study different delivery methods of work. Both presentations concerned "home work." Employers are seeking cost savings and improved productivity. Workers are seeking more convenience, less stress, and personal cost savings. There were concerns expressed regarding lack of recognition of the worker's contribution of 'home space' to the alternate workplace. At present there is uncertainty about tax benefits, security (particularly the ability to go back to a work site), safety issues (like WCB coverage and poor ergonomics) and isolation. However, alternate work arrangements have to be continually revisited as the capacity of technology advancements continually affects the potential outcomes of the alternative work arrangements. However, it was recognized that Information technology does create new opportunities.

We talked about the potential for the information highway to create opportunities.

1. Competitive Advantage in the Global Market Place:

- We saw advantages in employees having quick and direct access to information, delivered without the distortions and confusions that can come from delivery through a hierarchical structure.

- We felt the quality of the information can be better available, although there was some concern expressed about the quantity and quality of some internet based information.
- Clearly the use of IT can reduce costs.

2. Improved Client Service Delivery of Government Services:

    - We heard of the impact of IT development on an important income stabilization program - the Net Income Stabilization Account (NISA), Agriculture Canada. This illustrated the opportunities Technology has for delivering government services to consumers in a more efficient way.

3. We saw the potential for opportunities for Improved Communication:

    - Time and distance barriers are removed as the cost of sending information plummets. This is especially positive for Canada, and particularly Western Canada, the home of wide open spaces because of the vastness of our country. Our advantage is space, our limitation as a country has been the cost of communication, which is falling.
    - The less hierarchical structures in organizations combined with the variety of communication methods offered by Technology can put information at workers disposal. This offers opportunities for a more enabled workforce, although management styles need to keep pace in order to take advantage of this new opportunity.

4. Occupational Opportunities:

    - We saw both new and changing job or work opportunities.
    - increased autonomy.
        - direct access to information.
        - self management.
    - increased productivity and efficiency.
    - increased competitiveness.

5. Quality of life:

    - We recognized that the same technologies offered new opportunities to improve safety and personal security for workers and for others like the elderly. It also opens up new opportunities to provide equal access for those with limitations on their ability.

6. Personal Growth can be enhanced, for example thorough the opportunities given by distance learning.

7. We saw the potential for Increased Flexibility for place & time of work, education

Worker Protection Issues Associated with the Information

1. Introduction of new technology needs to be managed:

    - There needs to be open consultation between employers, employees, and unions. There appeared to be optimism that stakeholders would make this commitment and realize on this opportunity.

    - There was a recognition of the need for cooperative decision making between employers, employees, and unions. The newer flattened management styles combined with the enabling offered by new technology can encourage this.

    - Labour codes need to be updated or modernized to clarify or afford protections for those working in the new environments.

    - Joint health and safety committees roles should expand their roles to include managing the new technologies.

2. Changing definition of the Workplace requires changes in the following areas.

    - recognition of skills across organizational boundaries.

    - transfer of accreditation of core competencies.

    - portability of benefits.

    - benefits for part time workers need to be pro rated.

    - need for clarification of "workplace".

There was a recognition that as the economy changes, people's employers will change. We felt that new initiatives were needed to protect the continuity and recognition of the employee's accumulated expertise, skill sets and benefits across the perhaps inevitable, but hopefully temporary, changes in working relationships.

We reviewed the strategies suggested in the Minority Report and focused on three as particularly important:

    - need to set social goals for information technology.

    - job strategy agenda.

    - consideration of the newly adopted international standards on home work.

3.   Training

     •   management and staff.

4.   New Health and Safety Risks

As might be expected, here in Alberta we had some vigorous debates, but underlying the vigor of the debate emerged a robust willingness to tackle the issues, overcome the barriers, and take advantage of the opportunities of technology.

Summary of Discussions and Small Group Reports

Welcome

Andrew Sims, Chair
Advisory Committee on the Changing Workplace

Andrew Sims, member of the Advisory Committee on the Changing Workplace, welcomed participants by contextualizing the Prairie Forum as part of the larger review by Human Resources Development Canada. He said results from this discussion, and from parallel discussions across the country, will be useful to the Collective Reflections process, the Information Highway Advisory Council, and to each of the organizations involved in the National Forum. Every sector is being affected by technological and workplace changes, Sims said. Dialogue and sensitivity between all of the sectors will help create a fair balance between the needs of employees and the needs of those who provide the work.

Sims delineated workplace changes that are profound and interconnected. Some changes are so broad, he said, that we can only try to come to grips with what is happening and glimpse the implications. Other changes mean that we have to learn to do things differently. New ways of working demand new ways of organizing workers. Collective bargaining and certain grievance procedures, for example, assume layers of management that no longer necessarily exist. Collective bargaining may not fit the needs of teleworkers in the way that it suits autoworkers. Changes in communication, such as the reliance on e-mail instead of meetings, have had as profound an impact on workers and labour organizing as split-schedule work and 24-hour work arrangements.

Technological and workplace changes are also influencing the way government builds and enforces laws. Labour standards have traditionally been expensive to investigate and enforce, but things can be done differently. Employers often complain not about the legislation, but about the cost of enforcement. A $20,000 cost for an investigation into a $500 dispute does not make sense. But now, an investigator can check employee records by computers, for example, instead of having to visit in person. Further, new technology can help educate employees and employers about labour legislation. This education can lead to self-enforcement of laws, rather than such a heavy reliance on outside enforcement.

Russ Brown, Regional Director General
Alberta and NWT, HRDC

In the course of its work, Human Resources Development Canada (HRDC) finds itself managing relationships, including the access people have to information and services. Rather than managing technology, HRDC is participating in managing the on-ramp to the information highway. Brown stressed the need to find seamless ways to change.

Every one of us is living the changes, Brown stressed, adding that the Forum was a good example of HRDC trying to engage in dialogue in new ways. Technological changes have already altered the HRDC workplace and its relationship with the public, with 90% of contacts now occurring by mail, automated voice response systems, and telephone, rather than in person. We talk less with people, Brown explained, and we rely more heavily on information and communication systems. People can file their unemployment claims electronically and check their claims within the system. HRDC is exploring the placement of kiosks and electronic access stations in public sites in the community, and HRDC colleagues in the North are learning about satellite technology so that Canadians who live in remote communities can have equal access to the information highway. And staff training within the Department is done more through information systems and distance learning, through outside partners like Athabasca University.

Access remains a significant issue. HRDC recently met with the province of Alberta to discuss the management of databases and communication with clients. The conversation quickly turned to Web sites and the extent to which the client base, in this case seniors, have access to hardware and software. During a discussion with the Canadian Paraplegic Association, Brown found that the focus soon shifted from ramps into buildings to ramps onto the information highway. Aboriginal leaders are also asking how they can gain access to the databases and automated systems used by governments. These discussions all raise questions of privacy, access, competence, systems interface, compatibility, and modalities of service.

HRDC struggles with questions related to traditional worksites and home offices, Brown said. Mobile labour affairs officers are engaging differently with clients and governments. Their workplace has become the office they happen to be in. This mobility leads to new issues of workplace safety.

The Human Impact of the Information Highway on the Workplace

Danny Foster, Net Income Stabilization Account
Agriculture Canada

Foster discussed the evolution of the Net Income Stabilization Account (NISA) and highlighted lessons that can be drawn from the experience of a young organization that undertook rapid change.

NISA began in 1991 as a voluntary income stabilization program for Canadian agricultural producers. It serves as a core safety net program to help farmers in Canada manage their financial security. Eligible participants deposit money into their accounts and receive matching contributions from the federal and provincial governments. Accounts earn regular interest plus 3% bonus interest. The account consists of two funds: Fund One holds participant deposits, after tax, and Fund Two holds matching deposits and all interest earned, which is only taxed upon removal. Funds can be withdrawn in lower-income years, if the farm's gross margin falls below its average for the previous five years, or if the income from all sources falls below a minimum income threshold.

NISA's first years were a disaster, Foster said. There were 16 retroactive policy changes within the first nine months. The initial 27-page application form was inappropriate for the client base. The program relied on outdated informatics technology and had to add 300 additional staff to process applications manually. NISA ran a 100% budget overrun, it took the program nine months to process claims, and farmers in need had to rely on other safety nets.

By 1994, NISA had to step back, establish goals, and develop a business plan. Major improvements included a re-engineered delivery process and a new Windows-based client-server system. Client satisfaction was improved by adopting a two-stage application process which eliminated application mistakes. Clients sent in the information and NISA sent back their choices for entitlement. Staff job satisfaction was improved by replacing the assembly-line system with an account manager concept, which allowed staff to follow a case from beginning to end.

From 1995 to 1997, NISA continued to search for cost and service improvements. To build on strengths, the organization formed strategic alliances with Revenue Canada Taxation (RC/T) and Canada Post. NISA met its need for expert keying by contracting with RC/T, where trained staff were about to be laid off. Revenue Canada Taxation staff now directly download the information to NISA, while Canada Post handles the withdrawal requests. NISA managers deal only with problem accounts or incorrectly completed forms.

NISA is still committed to continuous improvement, Foster said. A combined NISA and income tax form for farmers is scheduled for 1997, saving government money and consumers' time. Optional e-mail filing is proving to involve fewer mistakes, since consumers tend to have their accountants file for them. An emerging Wide Area Network

is allowing NISA to communicate electronically with its partners. By relying on Revenue Canada to process applications and on financial institutions to pay them, NISA can focus on program development and client education. Meanwhile, the financial institution interface results in storefront service for NISA producers.

Foster drew several lessons from NISA's experience. Client services have greatly improved. Applications which once took six to nine months are now completed in four weeks, with a cheque issued within ten days. The strategic alliances have allowed account managers to use their time to staff the popular client assistance 1-800 lines.

NISA has also achieved considerable cost savings. Staffing has been reduced from 425 people in 1992-93 to 140 in 1997-98, while the operating budget has fallen from $24.6 million to $9.7 million in the same period. NISA has been able to attract more business, and is now able to extend the work season for its staff.

Foster outlined the factors that allowed NISA to turn its operation from disaster to success. Staff and management commitment encouraged everyone to pitch in to overcome the early problems. This teamwork has been enhanced by the project teams structure. Divisional walls are very transparent, and open communication allows changes in the organization to be discussed with staff well in advance of implementation. Staff tend to support initiatives because changes are always linked to their vision and goals, Foster stressed. NISA spends five percent of its budget on external staff training, and Foster argued that this investment has paid off.

At the same time, NISA faces challenges to its continuing success. As a government employer, NISA has difficulty competing with the private sector for information systems. Clients are often aware of other services they could get in the private sector. As a small employer, NISA has difficulty keeping pace with ongoing technological advancement. Its strategy is to piggyback on larger organizations like RC/T. Due to its seasonal nature, NISA has trouble attracting and maintaining qualified staff. Developing new business will help alleviate that problem. And finally, Foster expressed concern for the stamina of NISA personnel. So far, the program has relied on the youth of the staff, their energy level, and their ability to adapt to the swift pace of change, but this advantage won't last forever.

Ron Carlson, Communications
Energy and Paperworkers Union of Canada

Carlson addressed the pressures placed on workers by technological and industry changes. The CEP represents well over 30,000 workers in the direct telephone industry and related manufacturing, and almost as many in the closely related fields of media and cable convergence. Carlson placed the telecommunications industry at the centre of the age of communications, and argued that change is creating more challenges than opportunities.

Carlson characterized the information highway as an advancement of the global economy using technology and information. Recent changes have focused on industry restructuring, creating turmoil in the workplace. The big players are multinational corporations that have eliminated hundreds of thousands of jobs through downsizing, re-engineering, privatization, and work intensification. Wages and working conditions have also been affected. Labour, environmental, and human rights organizations and some publicly-elected officials have tried to curb the worst impacts of the increasing economic integration of North America, including the North American Free Trade Agreement.

Carlson explored three trends that are placing pressure on workers in telephone companies (telcos) - industry reorganization, new technologies, and company restructuring. He attributed these changes to the telcos' need to cut costs, increase profits, and transfer traditional expenditures into new initiatives to facilitate the emergence of the information highway.

As the telcos have reorganized, workers have seen job loss through downsizing, right sizing, outsourcing, and centralization. Advancements in software technologies have replaced traditional clerical functions. Telcos are restructuring into divisions that are accountable for profits and losses, creating internal pressure on jobs, wages, and benefits. Various management structures, such as union/management ventures, teams, and Total Quality Management, are creating internal conflicts between union members. Workers are dealing with higher stress loads, combined with decreasing challenges in their daily work.

Business needs have been prioritized to the point that level of service depends upon where the customer lives and the access they have to telco competition. Foreign ownership limits in Canada have been increased from 33% to 46.7%, in a move that will likely lead to more foreign buyouts and consolidation of Canadian telcos. A lack of a federal policy direction for telcos is leading to unnecessary reorganization and turmoil, and a reluctance to invest in equipment and employee training.

Telcos and cable companies are spending money in Canada, but mostly in the form of takeovers, buyouts, and reorganization. Telcos, cable companies, and other technology-based carriers are introducing new technologies with an eye to becoming full service providers of both telephone and cable interactive services. Canadian telcos tend to purchase American technologies rather than invest in Canadian research and development.

Canadian telephone unions have formed an alliance called the National Alliance of Communication Unions (NACU). NACU has developed shared platforms, including calls for service standards for all Canadians, controls on foreign ownership, and a requirement for each company to contribute towards Canadian research and development.

At the local level, unions are promoting health and safety to protect workers from the new safety hazards that come with new technologies. Unions are negotiating for as many full time jobs as contracts allow, and for variations within jobs so that the work becomes more meaningful. They are fighting for job security by limiting contracting out, partnerships or alliances, and by promoting technical change language so that workers have the right to training and retraining. Unions are also creating training committees and pushing for appropriate compensation.

Discussion

Steven Leahey addressed issues of belonging and competition. As information distribution has been separated from physical production, information services have become highly mobile. When a community tries to develop its information sector, the best way to compete is to become a place where workers want to live and work, rather than trying to attract corporate offices. This difference is fundamental, Leahey said: we have to think about the way society structures itself and behaves.

Carey Barnowski raised issues related to training, including the question of who covers the costs. Revenue Canada is in constant training mode, he said. Terry Cristall added that training has to include management, employers, leadership and the traditional work force.

Keith Archer noted that training is typically the first issue on every agenda and is worth concentrated discussion time. Danny Foster's expenditure figure of five percent for staff training is helpful, because few organizations could boast the same commitment, he said. A complex mix of resources will be required to enable people from various contexts to gain access to training. Some lifelong learners can pick up some costs, but other systems must be put in place for people who cannot afford that contribution. Further, there is a need for a greater diversity of accreditation models, to acknowledge the short-term skills training that people are receiving.

There is an obvious link between training costs and frequent updates in technology, Archer added. Clearly, these must be seen as ongoing expenses and not short-term investments.

Andrew Sims agreed that training has become an ongoing operational cost, included in the overall cost of doing business.

Doug Kelly called for a commitment to the worker. He illustrated this point with two scenarios. In one case, a company out sourced some of its operations and workers felt devalued. A second workplace faced the same challenges but the employer decided the company should grow the employees through the process. This second company earmarked the money for training, and workers felt valued and endeavoured to put results back into the company. Kelly suggested that the true cost of outsourcing includes the loss of corporate knowledge and the expense of rehiring. If these costs were factored into the equation, some restructuring might not look so attractive.

Jennifer Marchant noted that the discussion so far assumed information technology as a given, rather than acknowledging that technology is also an ongoing cost. She asked who is responsible for covering the cost of new technology - the supplier, government, or the end user. Supplying everyone in the North with information technology would cost an exorbitant amount of dollars, she said, but telcos cannot afford this cost and neither can the end user.

Jacquelyn Burles agreed that the cost is high, but added that if government and business want to make information available, they have to think about access. She cited the extra expense of having to produce material in two ways, electronically for the information highway, and as traditional text for those who cannot reach that highway.

Donna McWilliams challenged the idea that the information highway is driving workplace change. Competition is at the root of change, she said, and information technology is helping us. She added that information technology becomes a barrier to communication when people operate from different information platforms that will not interface.

Ron Carlson agreed that there is a need and obligation to provide a universally accessible system. Costs should be shared according to standards of reason and fairness. He also questioned the push towards wholly automated systems, noting that some clients want to see and talk to people. If this need is not met, customers may very well turn against automation and the companies that use them.

Carlson added that it is wrong to expect workers to adapt to technology, rather than requiring technology to adapt to the worker. Some flexibility will obviously be needed, he said, but people's whole lives should not be changed. He also suggested a distinction between training and retraining, noting that people traditionally receive their initial training before entering the work force, but that employers should be responsible for any retraining.

Bob Russell called for a distinction between new technologies and the social organizations in which they are embedded. New technologies will submit themselves to the social relationships we design, he argued. The real question is what kind of social organizations we want. He noted that the February 1997 paper by the Steering Group on Workplace Issues and Lifelong Learning reflected this conflict over the cost of training. He described the task of creating a training and retraining culture in Canada as a national project that should not be left to individuals. He added that a commitment to lifelong learning runs counter to the current trend toward a contingency work force.

New Approaches to Work that Utilize Information Technology

Carey Barnowski
PSAC

Carey Barnowski of Public Service Alliance of Canada gave the first of two presentations on pilot projects involving telework. The pilot project's findings were detailed in a report, "Alternative Work Environments", that was included in each conference packet.

Initially, the idea of teleworking was popular among Revenue Canada employees. There were a great number of people attracted by the benefits of not commuting and reduced costs for transportation, parking and clothing. Production levels among teleworkers rose dramatically. However, this popularity soon waned. Barnowski noted that few of the initial teleworkers still work from home. This reversal led to a problem of finding space for these employees when they wanted to return to the office.

Approval from the unions was key to the overall acceptance of the pilot project. Barnowski explained that although the final report was biased in favour of management, the unions did play a major role in the telework project. The unions endorsed the project because some workers, especially those in larger centres, were interested in such an arrangement and its advantages. Employees are dealing with constant pressure to upgrade, learn new technologies, and keep up with their co-workers. Budget cuts are also a threat. Each employee is now responsible for a large number of tasks rather than a few tasks, but there has been no recognition or compensation for this change.

Initially it was believed that a telework project would save Revenue Canada money, especially for office space. Advocates of the project argued that telework was revenue neutral as it would cost the same to have workers at home or in the office. Advocates promised long-term savings in office space, but unexpected additional costs were soon discovered. When workers at home were unable to connect to the Local Access Network (LAN), additional copies of registered software had to be purchased for each home computer.

> *"With this technology, you're doing not only your job but the jobs of a secretary, the clerk, your worker and management jobs. You're doing it all together. The knowledge necessary to properly operate all these systems is phenomenal... It's additional jobs that you're performing, but it doesn't show on your job description and it doesn't give you any extra dollars on your pay cheque."*
>
> Carey Barnowski, Public Service Alliance of Canada

Security emerged as a major problem. Revenue Canada's databases, files, and documents consist of confidential personal and financial information on Canadian citizens. Measures are taken in an office setting to ensure this confidentiality, including restricting access to employees only. Management soon realized that files in employee homes posed a security risk, and ordered teleworking employees to work in a space that could be locked when not in use. This caused some tensions between management and employees, especially when conflict arose over the tax deduction of office space. Revenue Canada saw teleworking as a

benefit to its employees and objected to allowing them to include home office space as a tax deduction. Employees, on the other hand, pointed out that the space was a requirement of the job, especially since it had to be locked when not in use.

Other concerns with telework soon emerged, including some which were the result of confusion and miscommunication. Employees were unsure if Workers' Compensation would handle claims made by people working from home. Insurance and utilities costs were also a source of conflict, as there had been no real discussion of employer/employee responsibilities before the telework project was underway.

Isolation was one of the most common reasons that teleworkers cited for their return to the office. Barnowski pointed out that it takes a certain type of individual to work unsupervised at home. As well, there were a number of concerns that had not been taken into account. For instance, how would an employee be affected if a family member was home sick during work hours? While sick time among the employees themselves went down, there was a suspicion that workers continued to work while they were sick. Barnowski suggested that employees found it easy to work in the afternoon if they felt better, compared to workers who take a whole day off rather than commute into the office for the afternoon. However, it was never clear whether Revenue Canada would lose more through sick time than they would through sick employees.

Donna McWilliams
Telus Management Services Inc.

Donna McWilliams, Director of Human Resources, Business Sales, Telus (formerly AGT Limited), presented the findings of a telework pilot project conducted by Edmonton Telephone (EdTel) from June 1994 to December 1996.

In 1994 EdTel decided to undertake a pilot teleworking project for its operators who dealt with directory inquiries and public assistance. The operators' job was a demanding one, full of repetition, stress and high volumes of calls. The main goals of the project were to examine the impacts of teleworking on production and morale for the employees and to explore its cost effectiveness for the company. There needed to be benefits for both the employer and the employees for the project to be considered a success.

Although EdTel did ask for volunteers for the program, there was an intense screening process before the final teleworkers were chosen. In the end, eleven employees were approved for the positions: seven were to work from home and four from remote satellite locations. EdTel agreed to provide each employee with a computer and furniture; the employee had to set up an area dedicated to the job.

In order to monitor the effectiveness of the project, these employees were expected to keep a daily journal of their experiences and report for psychological evaluation at the University of Alberta psychology department. The company, concerned with performance, compared the production of the teleworkers with that of employees working in a traditional setting.

Both the employer and the employees went into the project expecting to benefit in a number of specific ways. EdTel expected productivity to improve as they believed sick time would fall. They also hoped that teleworking would make the work more accessible to all potential employees. Finally, they believed they would eventually save in expenses such as office costs. Employees were anticipating increases in job satisfaction and morale, converting commuting time to free time, and reduced transportation, parking and clothing costs.

Technology presented the first problem. Difficulties with technical platform malfunctions and other glitches resulted in a great deal of down time. As well, there were conflicts over the furniture given to the employees, as it was older and therefore less ergonomic than furniture available in company offices. Household privacy also caused problems, and employees soon requested that they be given advance notice of home visits. The EdTel employees did not run into the security or accessibility problems with their databases that plagued the Revenue Canada project.

The employees found that working at home gave them more job flexibility and a greater sense of control over their work and work environment. Being at home did not eliminate the need for child care, although employees could be available for family emergencies and pregnant women could work closer to their due date. Unlike the participants in the Revenue Canada project, employees of EdTel enjoyed being away from the office because it helped them avoid distraction. E-mail and other ways of connecting with co-workers prevented them from feeling isolated.

Despite these factors, the overall results of this pilot project were not encouraging. The initial increase in production soon fell, just as it had in the Revenue Canada experiment. The absenteeism rate rose, although the number of late absences fell. Employees did not report any greater job satisfaction and felt less productive, less committed to EdTel, and less committed to the union. The up-side was that employees believed their stress and anxiety levels had fallen. EdTel also discovered that the project was expensive to support and would require more investment, while generating no real savings in office space or other costs.

When, in December, 1996 it was necessary to make a decision on the future of the project, EdTel pulled the plug. There were other factors in this decision as well, most significantly the merger that was taking place, but McWilliams suggested that the choice of occupation may have led to the project failure. Positions that depend on networks and databases may not be the most suitable for telework. However, recent changes in technology may mean that a similar project would meet more success today.

Information Highway Opportunities

Tom Lockhart
AVL Automatic Vehicle Locations Systems

Tom Lockhart, President and General Manager of AVL Automatic Vehicle Locations Systems Limited, presented a report on his company's successes with AVL technology. He explained that while AVL is a young, small company with only four employees, its growth potential is excellent.

Automatic Vehicle Location (AVL) has three main functions: it can locate vehicles, communicate information to and from vehicles, and analyze information gathered. AVL has a number of applications for employers, including displaying maps on in-vehicle screens for drivers and on remote maps for dispatchers. AVL is a practical tool for moving data from a vehicle to an office, Lockhart explained. AVL can relay instructions specific to driving, such as traffic condition reports, or it can be used for other business communications. Some companies using AVL have seen their productivity increase by as much as 15%. According to Lockhart, there are a number of benefits from AVLs. For example, a company dispatcher can use AVL technology to pinpoint locations of drivers and relay orders or information as needed, making better choices of who should go where and when.

Lockhart's firm tries to help companies choose the means of communication that are best suited to their needs. Often this means that the company uses a method that is already in place, such as conventional radio, cellular technology, or satellite.

Concerns that AVL technology will replace workers is misplaced, since AVL cannot interact with customers as employees do. Instead, systems such as AVL can bring technology to the level of the people who are the primary users, giving them another tool to perform their job in a better way. The very nature of work changes, as the employee is given the tools to become the boss.

> *"It's kind of simplistic, but what you've got here is a technology that can put information right down to the level of the people who actually have to use it, and become part of the process."*
>
> Tom Lockhart, Automatic Vehicle Location Systems

Some Thoughts on The Desirable Workplace

Guest Speaker Professor Bob Russell

Professor Bob Russell, Department of Sociology, University of Saskatchewan, said that his experience encapsulates two aspects of the desirable workplace: choice and autonomy. "Part of what many of us would consider to be a desirable work environment is one in which we experience some real discretion and control over the manner in which the work is undertaken," he said. "This is really what we mean by such notions as challenge, skill and empowerment."

Russell resisted using the popular phrase 'the future of work' in the title for his speech. "First, the future of work scenario seemed to be too deterministic," he said. "There is no one future, despite what the technological determinists and futurologists may say. Indeed, the defining feature of the new technologies are their essential openness. The future will *not* be decided by the new technologies alone, but by how we collectively decide to use them. That is a political question and as we all know, politics and political choices can be highly variable." Thinking about the desirable workplace is not a strictly Utopian exercise. Rather, it allows us to look at where we are and at what we have, in the context of where we would like to be headed.

The level of discretion and autonomy afforded to future workers will depend not on technology but rather on the types of organizations technology becomes imbedded in. "If the past is anything to go on, we have good reason to be pessimistic," Russell said. Technological design and adoption has often been about disempowering and de-skilling workers. Russell cited Taylor's theories of so-called scientific management and Ford's development of technologies that put Taylor's theories into practice. Such systems generated employee apathy, alienation, rigidity and conflict which brought the vast economies of scale they created up against a productivity wall in the 1970s, Russell said. Studies that go back as far as the 1950s show connections between autonomy in the workplace, employee health, and overall operational functionality.

Russell painted two scenarios to demonstrate that new technologies are more versatile than previous technological revolutions. New technologies can be used to upgrade and empower the worker while creating a more pleasant work environment, but they can also be used to monitor and spy on workers in the name of increased productivity. "Which path is taken is to a great extent a political decision that will be grounded in the type of social structures that envelop the new technologies," he argued.

Russell explored the politics and social structures of two areas of his working life: his own occupation as a knowledge worker supposedly "riding the high tide of technological changes" and continuous process working environments in the mine and milling sector, which is his field of study. "It is often forgotten in all the hype that the new technologies are developed and exist ultimately for their contribution to production," Russell said. Using the Cohen and Zysman phrase, Russell reminded participants that 'manufacturing still matters'. Russell asked skeptics to consider how the fast food industry is a manufacturing as well as a service industry.

Russell recalled his initial reluctance to move into the computer age. As it turned out, the new technology did not take long to master - maybe three or four days - but the implications were profound. "A new and powerful tool had been placed in my hands," he said. Computer technology made his work easier and more fun. Free (or inexpensive), and nearly instantaneous communication with colleagues and specialists the world over had become possible. The finest libraries in the world could be accessed. A wider swath of information could be scrutinized as more research institutions and trade unions developed

their own web sites. New technology imparts little in the way of new knowledge itself, Russell claimed, referring to his own short learning time. Rather, today's computers and the information highway enhance access to existing information.

There were other workplace and human spin-offs. As faculty took on their own typing, some support staff assumed administrative assistance roles. With the advent of high university debts and cutbacks, other clerical staff are finding their jobs are being eliminated. New technology may have something to do with this, but so does the withdrawal of federal and provincial support for university operations. Political choices are determining that staff members be laid off rather than being retained in their jobs or retrained or reassigned if the jobs have indeed become redundant.

In his second example, Russell referred to the federally funded research he has conducted on the dramatic changes effected by technological change in the mining industry. Potash mining and milling operations now employ only half the people they did 15 years ago. The skipping of ore to the surface is now completely computerized. Large mill complexes are operated by as few as six or seven workers. Milling is now completely automated in computer controlled, closed loop, continuous feedback systems.

At the same time, the industry's structure has been massively altered through buyouts, mergers, and privatizations. Some companies have transformed themselves from potash mines into global fertilizer corporations, while others see themselves as agro-service industries for North American and off-shore markets. Human resource management practices have been rethought at each of the mines Russell examined. Some companies have turned to Total Quality Management (TQM), Continuous Improvement, and strategies of gain sharing, competency development, and coworker peer review. Others have elected to casualize labour. At one company, former full time employees are lucky to get in half a year's work, split between the spring and fall. The operation now suffers from poor morale and high levels of animosity and employee turnover. One firm that radically downsized in 1988 had to hire back practically all of its workers one year later. A climate of mistrust still pervades relations this firm, making the introduction of other management strategies very difficult. Another operation that downsized and farmed out some of its product line has become dependent upon massive levels of overtime work. "Slowly, it seems as though corporate managements are beginning to realize that downsizing is not the panacea, or magic bullet, that it was once thought to be. But at what price?" Russell asked.

Russell examined the newest fads in labour management - TQM and Continuous Improvement. Rather than new learning opportunities or more rewarding work experiences, workers report that technological changes and new management systems translate into what Russell calls the 'more with less' mentality. Work forces are downsized, work areas and responsibilities are increased, and it is simply assumed that the new technology will take care of any attendant problems that remaining workers may experience. Significantly, some of the firms that have introduced the latest HRM strategies have subsequently experienced the worst relations with their workers and lengthy strikes. Russell wondered where the consultants are when you need them.

Russell recommended that we set aside the 'more with less' mentality that leads to short-term gain and long-term pain. Workers from the time of the Luddites haven't been against new technologies *per se*, but only against the irresponsible use of technology. The desirable workplace attempts to enhance working life rather than degrade it through stress and pressure. The desirable workplace favours a co-determinative consensus around the adoption and modes of utilization of new technologies. Negotiated change is the key, Russell said. Joint training and technology monitoring groups would be serious steps towards negotiating that future.

Small Group Reports

Three small groups, represented respectively by Myrna Nerbas, Maggi Hadfield and Alec Campbell reported on their morning discussions.

Nerbas summed up Group One's assessment of technological change as: "it's good but...". Most of the group agreed that while technology was a positive tool for the workplace, they were concerned about how this technology would affect workers. Job security was a particularly important issue.

The priorities for Group One were the issues of training and balance. In order for technology to be effective in the workplace, employees need training to perform required tasks. But who would be responsible for the costs of this training? The group argued that it is the employer's role to provide training, much in the same way as it is the employer's role to provide a safe work environment. If employers are truly committed to using the new technology, they should ensure that their workers are able to use it.

Group One was quick to acknowledge, however, that business and government are being driven by cost reduction and may not be interested in meeting the needs of their workers. But the group maintained that in order for technology to be introduced in a way that will benefit all, employees' needs must be balanced against those of employers. The balance must be struck in a way which ensures that technology enhances people's lives. The group made some suggestions for increasing the cost effectiveness of technology: schools could be made open to the public, for example, so the technologies could be used by more people.

Group One raised several other issues, including the role of contingency workers in a technology-driven workplace and Canada's land space as an economic advantage. Distance learning was touted as an ideal option for Canada since it is cost effective even over long distances. The role of technology for people with disabilities and access difficulties were also raised.

The second group debated one participant's suggestion that, in the long run, more jobs are created by technology than are lost. A representative of the Communication Energy and Paperworkers Union, responded by asking how long it would take. Group Two was concerned about how technology was going to effect workers, and they wanted to ensure

that workers were treated equitably in the new climate. Some members called for a new infrastructure that would bring work to the people and not people to the work. Others suggested that workers could move into different jobs within the same organizations.

Group Two was also concerned about the quality of the jobs created by technological change. They wanted to see good jobs being created, and defined "good" jobs as well-paid, multifunctional and secure. Some members noted that production was increasing and the cost per unit for services was decreasing because of technology, and argued that these advancements could be translated into gains for workers. Such gains include increases in autonomy and alternative work arrangements.

While this group was concerned mainly with the effects of technology on workers, they acknowledged that technology would improve the competitive position of Canadian companies in the global market. As well, increases in workers' autonomy might translate into increases in production, another gain for business. Technology has also improved other aspects of people's lives. Seniors, for example, have benefited from technology such as personal alarms in their homes. There are also health benefits: pharmacists can track all the prescriptions their client are taking and provide more comprehensive advice.

Group Three restricted itself to discussing the positive aspects of introducing technology into society, although Alec Campbell, who was reporting for the group, noted that they were aware that negatives existed. They identified three main positive themes: flexibility, growth, and communication.

Flexibility has increased because workers have more choices. Technology now allows people to learn and work from more places. People can spend less time commuting. Growth has occurred in the educational, occupational and personal realms. Different types of growth were mentioned, such as new employment opportunities and new types of employment. Technological changes have widened access to information. The information is of higher quality because the information travels through fewer channels and delivery is less-hierarchical. As well, safety and security applications of technology are improving the quality of employees' lives through emergency systems and vehicle tracking.

The Challenge: Working to Ensure Worker Protection

Lucien Royer
Alberta Federation of Labour

Although Canadian discussions of workplace change have advanced greatly in the last ten years, it is now time for those changes to be made. Royer said that there has been enough talk. Although information technology is not his primary area of expertise, he has been promoting its application to improve workplace conditions for ten years. Royer's presentation concentrated on Jean-Claude Parrot's Minority Report and its implications for Canadians.

Royer challenged accepted assumptions about information technology. He argued that language used by government, business and labour to discuss information technology in the workplace is inadequate. The term 'workplace' itself is problematic because it limits work to a specific place. Royer asked people involved in the discussions to question the language they are using.

By ignoring the international climate, Canada has ignored consumer markets and new opportunities. By ignoring the consistent world-wide lowering of workplace standards, Canada has been unable to have any influence in stopping these trends. Royer recommended that Canada look at the local impact of information technology and develop an international approach to the issue.

Royer rejected the argument that there is a net gain for workers in the information technology boom. New jobs will be less secure and less satisfactory than the jobs lost. There will be increased competition for jobs and more part-time or contract positions. He turned popular opinion on its head when he argued that the manufacturing sector has created trends such as sweatshops, and that information technology only reinforces those trends, rather than the other way around. Parrot's Nine Points in the Minority Report provide evidence of these trends, and Royer encouraged participants to review them.

Finally, Royer addressed the issue of information technology as a savior. Information technology is a tool for Fortune 500 companies, a way of cracking the electronic whip on the backs of workers. If trends continue, companies will keep privatizing the technology, creating less competition and less choice. Soon, marketing will be out of control, with opinion polls and consumer marketing disguised as democratic process. So-called 'smart' software will monitor workers' productivity. Fewer jobs will be available as jobs collapse into each other, and 'job enlargement' will mean more take-home work. Middle managers will disappear as workers are expected to police themselves. All this will lead to an increase in stress and conflict for workers. How, asked Royer, can this be positive?

Royer offered several solutions to these problems, including creating a vision or goal for information technology, protecting workers internationally, and focusing on monitoring the workplace rather than the worker. The key for these solutions is education on many levels and in many ways, including distance education. The goals and roles of information technology need to be determined by business and labour to ensure the rights of workers will be protected internationally. Royer saw an important role for the unions in this work, and encouraged them to make their voices heard in the discussion. Traditional labour relations need to change, using the available technology to adapt to new situations and new ways of working. The unions must take this opportunity to speak up for what Royer called a 'desirable workplace'.

Small Group Reports: Ensuring Worker Protection

The first group focused on the various roles of community, government, and business. They called for a broad consultation on the social goals of information technology. Technology needs to be used wisely, and people must look at the motivations behind its use and introduction. We need to re-examine the ideology of the market economy, which polarizes capital vs. people and serves the wealthy. The market economy is only valid if we believe in it. There are other forces at work, such as a consumer's willingness to support a company that treats its employees well.

The community must work differently, depending less on companies and more on itself. Government has a duty to guarantee access and levels of service to every region of Canada. The federal government should develop an employment strategy for Canada, based on the nine points in the Minority Report. Canada must support the International Labour Organization's conditions on homeworking. Employment history and benefits for the casual/contingent work force should be transferable, including seniority, pension eligibility, and pro-rated benefits. This may dissuade companies from firing and rehiring so often.

Companies need to create cultures of employment within the workplace. Training is crucial, and funding should be jointly provided and available to all. Skill recognition and accreditation should be examined.

This group was particularly concerned about gaps between workers of different generations. Barriers based on age should be eliminated. Don't assume that experienced workers have less stamina or ability to learn. Don't put all the work on the young. In addition, older workers may have a great deal of "corporate memory" to pass on to younger workers.

The next group was primarily concerned that new injury risks be recognized and prevented. Insurers and employers need to recognize the specific disabilities such as carpal tunnel syndrome and stress-related diseases. Users should be asked for feedback about the technology they use. Unions can be a vehicle for open communication between employers and employees, and the big issues of information technology can be tackled in bite-size pieces.

The group recognized that new technology does not solve the problem of protecting workers, many of whom are caught between the productivity push and their health needs. Everyone needs to be involved in striking a balance between personal and work lives. Employees have to learn not to try to do too much and not get enthralled by the capabilities of new technologies. Employers have to learn not to ask their employees for too much. New technology is 'seductive'.

Employee groups can help to give employers new skill sets and 'coaching' on worker protection issues. Both staff and management need training because we're still using industrial methods in an information age. We need to go beyond minimum protection of worker rights. Information technology may make possible effective enforcement of worker rights.

Finally, the group recommended we look at the social costs of restructuring measures like downsizing. It's absurd that our taxation dollars support unemployment rather than employment.

The third group was concerned about the proper management of the introduction of technology into the workplace and called for labour codes to be reviewed. Legislation may be necessary to protect workers from dismissal if they can't keep up with technological changes fast enough. Training should be a shared cost, and a shared arrangement may need to be legislated. Everyone should work on developing a cooperative process within the organization. Joint health/safety committees can provide a model for managing the introduction of technology.

Planning The Prairie Regional Forum Presentation

The final task for participants was to identify what they wanted to be included in the next day's presentation to the teleconference. To simplify the discussion process, HRDC staff had itemized the main points of the day's discussions and lectures into the three streams of the forum: the Human Impact, Opportunities, and Worker Protection. Participants were then asked to clarify the points to make sure the list represented items discussed, points of agreement, and issues that require further discussion.

The Human Impact

The Human Impact category covered three aspects of how technology is changing the lives of employers and employees. The nature of work is changing, and participants have explored issues of outsourcing, the contingent work force, the flexibility of the workplace now that it is less time- and space-dependent, and the flattening of hierarchical management structures. The following technological limitations have been identified: lack of common interface platforms, the escalating pace of change, and issues of adaptability. Training and retraining are requirements in order for technology to be a benefit to all. Participants have discussed concepts of lifelong learning, cost sharing, and training for employees and employers alike.

Bob Russell expressed concern that the implications of the term "adaptability" have not been examined. He pointed out that workers are being expected to adapt to technology, whereas it would be more logical and desirable for the technology to adapt to the worker. Although several people agreed with his position, other participants emphasized the limitations of current technology and limits on technology designers. Leeann Thompson, for example, stated that because technology in her field is customer-driven, it may not be as flexible for worker needs. Jennifer Marchant agreed that technology is evolving and cannot always be adapted for workers. Ron Carlson disagreed, arguing that technology can be adapted to be more worker-friendly if the employer wishes to make it so. In response to Steven Leahey's comment that technology is developed elsewhere out of local hands, Carlson listed ways in which technology is being developed and adapted in Canada to

respond to worker needs. He gave the example of operators developing a different system of breaks in their workday. Another participant added that technology must also be designed for the task that needs to be accomplished.

Carlson also requested that two points be added to the list: the role of monitoring and the quality of jobs being created. The issue of monitoring was added, but participants voiced their disagreement over categorizing some jobs as 'bad' jobs. Rob Jack said he did not believe all the jobs being created were necessarily "bad" jobs. Carlson agreed but argued that the ratio of bad jobs to good jobs is now seventy to thirty. The moderator Helen Shannon flagged this point as something to be portrayed as a source of controversy that requires more discussion.

Opportunities

The Opportunities category included increased flexibility, occupational opportunities, improved occupational autonomy, global marketplace advantages, improved communication, and enhanced quality of life and personal growth. This category was changed to 'potential' opportunities because not everyone felt these developments would necessarily enhance people's lives. Myrna Nerbas, for example, pointed out that every item on the list had a downside or negative aspect to it. Some participants, however, objected to the addition of potential. Marchant argued that several changes noted by the list were not potential but rather existing and real. 'Improved' opportunities was rejected by those who argued that the quality depended upon delivery and interpretation.

The second controversial point concerned the "quality of information" available from technological changes. Keith Archer called "quality" a debatable point, since information put on the Internet was not regulated or monitored for accuracy. Doug Kelly emphasized the quantity of information on the Internet and the increased scope for gathering information. Another participant argued that information taken from the Internet requires more vigorous assessment because of its dubious quality.

Worker Protection

This grouping detailed the more important areas to be addressed for workers when introducing new technology. The list included the proper handling of the introduction of technology, based on the Minority Report strategies; changing the definition of the workplace; new health and safety risks; and training.

Lucien Royer clarified the reference to the Minority Report. Three specific areas need to be looked at: the job strategy agenda, the international standards on home work, and the social mores for information technology. His clarification was added to the list.

The term "employment history" caused some confusion. This term was intended to refer to an employee's skills being recognized when transferring from one job to the next. Andrew Sims gave the example of an employee using their knowledge of one system to quickly learn a new system. While they did not have formal training in the new system, their experience should be recognized as a qualification. Sims suggested the term 'core competencies'. Ron Carlson added that participants have also advocated that benefits become portable and transferable to new jobs. Maggi Hadfield suggested core competencies include pro-rated benefits for part-time workers.

Carey Barnowski pointed out that the definition of workplace needs to be reworked to include telework and working at home. He also recommended that Worker's Compensation coverage be extended to home work. Some participants said the Labour Codes need to be updated to include such issues, since, as Bob Russell pointed out, they had not been revamped since the 1970s. Andrew Sims argued that changing legislation is cumbersome, so that legislation is generally out of date by the time it takes effect. He suggested more success would come from trade unions including technology upgrading in their collective bargaining. Myrna Nerbas noted that not all workplaces were organized, so other strategies were needed. Ron Carlson pointed out that it is difficult to negotiate protection of this type because the changes are rapid and unpredictable.

While everyone agreed on the necessity for training and retraining, there were strong concerns about how the costs should be covered. Carey Barnowski suggested that grant and loan programs for students be revised so that the growing number of part-time students could have access to funding. He also said students should pay for their original training and tuition but employers should pay for subsequent retraining. Ron Carlson agreed, arguing that the costs of retraining incurred when technology was introduced should be the employers' responsibility. Terry Cristall expressed concern that the right people may not be accessing programs. Training must be a net benefit to business, he said.

Andrew Sims suggested there is a difference between training and retraining. Keith Archer disagreed, calling this distinction a false dichotomy. Lifelong learning should be the emphasis in training, he said. Bob Russell recommended that all parties be involved in the implementation and impacts of retraining.

Some Thoughts on The Desirable Workplace — Calgary, February 21, 1997

Presentation by Professor Bob Russell

Each of us who is participating in this workshop most likely has some notion of what a desirable working environment would entail. Let me give you one simple criteria. When the organizers of this workshop called me to see if I would be willing to participate in this event, I was asked if I would like to give a luncheon talk. Yes, I really was given a choice! The parameters, as you will discover, were quite broad. I was simply to speak about the contemporary work environment and trends that I see developing in it. In other words, I was given some discretion and control over what I would do or say, and I hope that the organizers do not come to regret the autonomy (note autonomy, not authority), which they have extended to me. In any case, the point is a simple one. Part of what many of us would consider to be desirable work environment is one in which we experience some real discretion and control over the manner in which the work is undertaken. This is really what we mean by such notions as challenge, skill and empowerment and I would argue that these are essential components of the desirable workplace.

To continue with this little chronology a bit further, for starters I had to settle on a title for this afternoon's talk. Various possibilities occurred to me along the lines of "the future of work" theme. But this seemed wrong headed on two counts. First, the future of work scenario seemed to be too deterministic. There is no one future, despite what the technological determinists and futurologists may say. Indeed, the defining feature of the new technologies are their essential openness. The future will *not* be decided by the new technologies alone, but by how we collectively decide to use them. That is a political question and as we all know, politics and political choices can be highly variable. Secondly, a future of work type of theme, would undoubtedly cast me into the role of some sort of expert whose role is to pronounce upon the future that I seek to describe. I will leave it to you to decide whether I am an expert or not, but in any case I am reluctant to put forward any sweeping claims that would have the effect of bringing closure upon discussions and debates that we need desperately to continue here.

[On the role of experts, I am reminded of the similarities that have been drawn between the statistician and the drunk. The former uses statistics like the drunk uses a lamppost; more for support than illumination.]

Given these reservations, I thought it might be more appropriate to reflect upon desirable working conditions. Without being utopian, this has the advantage of letting us look at where we are or what we have, in terms of where we would like to be headed. And indeed, it may be possible to get some sort of consensus on this latter question.

In my opening, I alluded to the importance of discretion, autonomy and control in work. Technology, including the new technologies make this possible. However, it is not inevitable. The question as to how much discretion and autonomy workers in the future

will have is dependent upon what type of organizations the new technologies are received into; what type of organizations they become embedded in. If anything, this is the crucial question before us. But, if the past is anything to go on, we have good reason to be pessimistic. As scores of business and labour historians as well as sociologists have demonstrated, technological design and adoption has often been about disempowering and de-skilling workers. This was clearly Taylor's agenda with his theories of so-called scientific management. It was also Ford's agenda insofar as he pioneered the technologies that would permit Taylorism to fully come into its own. And as the social historian David Noble has demonstrated in such detail, early numerical control development, done at taxpayers' expense at MIT, was oriented to rendering skilled machinists redundant.

Today, we are prone to look back upon such systems of management as relics of a bye gone era. It is now widely admitted that in addition to creating vast economies of scale, such systems of work management were also generative of employee apathy, alienation, rigidity and conflict which finally resulted in hitting a productivity wall in the 1970s. Owing to these problems, there is now greater agreement on the pitfalls of such socio-technical complexes. But apart from that, is worker discretion and control a good thing in the workplace? I would like to think that is. I can tell you that there are a number of studies which go back as far as the 1950s which show connections between autonomy in the workplace, employee health and overall operational functionality. Conversely, an absence of control over job and work conditions has been associated with poorer employee health and indifferent performance.

As I mentioned earlier, the new technologies are incredibly versatile - much more so than the previous technological revolutions that have helped to shape our society. They can be used to upgrade, and empower the worker, while creating a more pleasant work environment. They can also be used to monitor, surveille, and spy on workers, all in the name of intensifying the work/effort bargain. Which path is taken is to a great extent a political decision that will be grounded in the type of social structures that envelope the new technologies. Let me give you some examples.

For illustrative purposes I am going to take two areas of work life, which at first may seem like an odd combination. One is the experienced realm of my own work. [This is one of the occupational hazards of being a sociologist, that is continually subjecting your own life to analysis, which is why friends tell me to get a real life!]. The other is a sector that I have spent the last four years examining, - continuous process working environments in the mine and milling sector. My choice here, however is not merely fortuitous or convenient. For one thing I am supposed to be a knowledge worker, or what Reich now terms, a symbolic analyst. I am supposed to be riding the high tide of tech. change and I would like to share a bit of this experience, personally, with you. As for the other sector, the mining industry, it is often forgotten in all the hype that the new technologies are developed and exist ultimately for their contribution to production. The traditional, or now not so-traditional sectors, such as primary and secondary manufacturing will continue to serve as the main market for the new technologies. As

Cohen and Zysman have reminded us, 'manufacturing still matters', and if anyone has any doubts on this score then you tell me whether the fast food industry, to take one example, is about manufacturing or service provision. Meanwhile, modern day mining has also been transformed by the new technologies and it may be informative for us to inquire further into exactly what the effects have been. So with that, I will start with the first example.

Example Number One

I was given my first computer by the university that I work for in 1986, ten years ago. I am now into my third generation of computers, having just purchased a new computer/laser printer system over the Christmas holidays. As I recall, I was a bit reluctant to make the move into the computer age. I was certainly not a technophile. At the time, I remember feeling mildly inconvenienced - something else to learn on top of a busy schedule. I also remember making one prediction and that was that I would never to able to get another paper typed by the departmental secretary! In retrospect, how have things turned out? The new technology did not take long to master - maybe three to four days. According to this criteria, I would hardly claim to have undergone a significant amount of 're-skilling'; it was certainly something less than a apprenticeship! On the other hand, a new and powerful tool had been placed in my hands. Computer technology had made my work, research and writing easier and more fun. Manipulating discourse - sentences, paragraphs, etc. - was facilitated by the computer. In short, the technology enhanced the opportunities for greater creativity. Virtual text could be created, tried out and then altered, before being committed to hard copy. This was literally liberation from the tyranny of the page! The very act of writing became more playful with the use of the computer and certainly editing was made less tedious. Perhaps, in the end, the computer helped to produce a better word mechanic! From the research end of things, near instantaneous free, (or in some cases low cost), communication with colleagues and specialists across the world became the new reality. From my office, at the university or home, the finest libraries in the work could be accessed. Meanwhile as more research institutions and organizations such as trade unions develop their own web sites, a much wider swath of information could be scrutinized. In this way the computer allows us to effect extremely powerful information searching engines. This is really what it is all about. In other words, the new technology imparts little in the way of new knowledge itself - witness my own short learning curve on how to use it, or the large amounts of semi-skilled, third world labour which are used to assemble the modern computer. Rather today's computers and the information highway enhance the acquisition of information, the raw material for new knowledge production.

The spinoffs did not end at my desk however. Supplying faculty with computers also had noticeable effects on support staff. With faculty now expected to do much of their own typing, some clerical functions were also enhanced. Some secretaries assumed administrative assistance roles, with more time dedicated to interacting with students and scheduling classes. There is, however, an emergent downside to this example. Facing a

$19 million deficit, other clerical staff will soon be laid off. Desk top computers, voice mail and other new technologies may have something to do with this, although it is by no means clear that their positions have been rendered anywhere near redundant. In any case, what is preventing these workers from being retrained and reassigned to other positions in the event that their current jobs are redundant is the withdrawal of federal and provincial support for university operations. A policy, i.e., political choice, rather than technological necessity is driving this dynamic.

Two points are worth emphasizing in this first example of tech. change. The change itself was initiated by the end user, myself. Aside from some mild peer pressure - namely, not wanting to appear as a techno illiterate - the introduction of the new technology into the work environment was a non-coercive event for me. Secondly, its introduction had unforeseen and unintended effects. It made my work more creative and exciting, but it inadvertently made it easier to put other jobs on the line, i.e., support staff.

A Second Example

A few miles out to both the east and west of the university are a number of potash mine and milling operations. Over the last few years I have engaged in federally funded research on changes in the mining industry. The changes to which I refer are two types. Firstly, tech. change has had a dramatic effect upon the industry. Numbers employed at each mine site are half of what they were 15 years ago. Underground, lasers and video cameras direct so-called continuous mining machines and the mobile conveyors which trail behind them. Skipping ore to the surface is now completely automated/computerized in all of the mines. On the surface, itself, large mill complexes are operated by as few as 6 or 7 workers, again approximately half the workforce that would have been found in the early 1980s. [A mill is approximately of the same dimensions as a medium sized, multi-story factory]. Milling is now completely automated in computer controlled, closed loop, continuous feed back systems. Imagine any other refining type of operation, (oil, petro-chemicals, nuclear fission) and you will have a sense of what these operations are like. Indeed, these are exactly the sort of exemplars that were first mentioned in the post-industrial literature, that is automated, continuous flow industries.

At the same time as this industry has been the object of considerable technological change, its social organization has undergone considerable alteration. Buyouts, mergers and privatizations have been witnessed. The companies in question have transformed themselves from potash mines into global fertilizer corporations. Some, no longer see themselves as mining operations at all, but instead as agro-service industries for the North American and offshore market. Part and parcel with these developments, labour management, or HRM practices have undergone rethinking at each operation that I examined. Some managements have turned towards new initiatives such as Continuous Improvement, Total Quality Management, and the accompanying strategies of gain sharing, competency development and co-worker peer reviews. Others have given

greater priority to the realization of labour market flexibility, an innocuous sounding expression that refers to the casualisation of labour. At one firm, which had previously instituted an informal commitment to full employment, employees now work what I would term a seasonal employment regime - a few months in the spring and a few months in the fall, which in each case is followed by lengthy bouts of layoff. [In other words, formerly full time employees are now lucky to get in half a year's work, spread out over two seasons].

What have been the effects of these changes on employees and their industry? Employment loss I have already mentioned. Unfortunately, we do not have any way of obtaining information on former employees and their subsequent job or retirement histories. Two firms chose to radically downsize in 1988. One was forced to hire back practically all of the workers that had been let go about a year later, on account of the operation becoming badly run down with the smaller workforce. The mine manager at this operation confided in me that had it been possible to sue the consulting firm that had conducted the original manpower audit and recommended the termination's, he would have seriously considered proceeding with a legal action! A climate of suspicion and distrust still pervades relations at this firm, 9 years later and has made the introduction of alternative HRM strategies very difficult. The other operation that went through a radical downsizing farmed some of its product line out to other divisions in the company. Just as importantly, however, it is now dependent upon massive levels of overtime work to meet its customer obligations. Whether this strategy can provide management with a long term solution to its labour requirements remains a debateable point.

The division that has introduced a seasonal work regime into its production schedules, with the attendant casualization of the workforce has also experienced major problems. Poor morale, high levels of conflict and animosity, (as signified in the highest grievance rates in the study), and employee turnover are all attendant problems. Slowly it seems as though corporate managements are beginning to realize that downsizing is not the panacea, or magic bullet, that it was once thought to be - but at what price?

Alternate HRM designs, such as those mentioned above, are also marketed with great fanfare by the consulting industry. Employees often sign on to such initiatives with hope and enthusiasm. In many cases, though including the ones examined in this study, disillusionment and cynicism are all that remains after the consultants have packed their bags. As we have already previewed, although the new technologies have the potential of providing for new learning opportunities and more rewarding work experiences, such results must be designed into the social structures which employ them. I would suggest that this is not what TQM, Continuous Improvement and the other current fads are about. Instead, workers report that tech. change, when combined with new management systems translates into what I will term the 'more with less' mentality. Work forces are downsized, work areas and responsibilities are increased and it is simply assumed that the new technology will take care of any attendant problems that remaining workers may be experiencing. This, however, does not necessarily follow. People generally realize when

they are being had. Significantly, some of the firms that have introduced the latest HRM strategies have subsequently experienced the worst relations with their workers, at least if lengthy strikes are any indicator. [Where are the consultants when you need them?]

To conclude, we must set aside the 'more with less' *weltanschauung* [a fancy word that sociologists use to describe a mind-set]. While it does hold out the opportunity of short term gain, the eventual price is long term pain! Workers, from the time of the Luddities, who incidentally have gotten a misleading and bad 'rap', are not and have never been opposed to technological advancement. Historically, they have been opposed to the irresponsible use of technology and I suspect that this will become an increasingly important dimension in contemporary work relations.

In this vein, the desirable work place does not use technology to downsize or to enhance employment insecurity. It probably won't work very well in this fashion (i.e., as a hammer) anyways. The desirable workplace does not use technology to monitor or spy, whether the workplace be an office, a factory, or in the home. On the other hand, the desirable workplace does consider the issues surrounding tech. change to be of such consequence as to require a co-determinative consensus around their adoption and mode of utilization. Negotiated change, (anyone remember the Freedman Commission?) is the key here. Additionally, such organizations attempt to maximize the opportunities whereby technology can enhance working life, rather than degrading it through stress and pressure. Joint training, and technology monitoring groups would be one indication of a more serious approach in this regard. Finally, a real alternative would eschew the utilization of 'experts' who are unfamiliar with particular institutional cultures and histories, preferring instead, internally generated solutions rather than externally imposed remedies, which are of dubious lasting quality anyways!

I hope that these thoughts have enchanted your dining experience!

Participants

Chair
Andrew Sims*
Member, Advisory Committee on the
Changing Workplace

Labour
Jacquelyn Burles
Union of Northern Workers

Carey Barnowski*
Public Service Alliance of Canada

Allen Bleich
Canadian Union of Public Employees

Ron Carlson*
Communications Energy & Paperworkers
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Lucien Royer*
Alberta Federation of Labour

Business
Toby Arnold
Siecor CCP

James Bremner
Bantrel Inc.

Terry Cristall
Number Ten Architectural Group

Rob Jack
Nova Gas Transmission Ltd.

Tom Lockhart*
AVL Automatic Vehicle Location Systems
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Telus Management Services Inc.

Bruce Ogilvie
Canadian Freightways Limited

Leeann Thompson
Canadian Imperial Bank of Commerce

Participants (continued)

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Jeff Hnatiw
HRDC, Labour

Marguerite McGregor
HRDC, Labour

Mike Sheridan
Canadian Labour Congress

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*Presenting

Andrew Sims, Member
Advisory Committee on the Changing Workplace

Mr. Sims is a member of the Advisory Committee on the Changing Workplace established by the Minister of Labour on August 30, 1996. The Advisory Committee will examine the issues arising out of the changing nature of work and the workplace and identify a range of possible approaches for addressing them.

Also, as the recent Chair of a Federal Task Force, Mrs. Sims took part in reviewing Part I of the Canada Labour Relations Code which culminated in the report "Seeking a Balance" published in February, 1996.

Appointed Chairperson of the Alberta Labour Relations Board in 1985, he remained in the position until 1994. From 1975 to 1985, Mr. Sims practised law, concentrating on labour and administrative law and appeared as counsel before every level of court, including the Supreme Court of Canada, largely on behalf of employees, trade unions tribunals and professional associations. His clients have included the Alberta Federation of Police Associations, the Alberta Union of Provincial Employees, the Alberta Medical Association, the Professional Association of Interns and Residents and the United Steelworkers of America.

Mr. Sims has chaired many boards of arbitration and labour proceedings, handled inquiries under the Individuals Rights Protection Act, and sat as member of the Board of Reference for the Alberta School Act.

Andrew Sims holds a Bachelor of Law (1974) and a Bachelor of Arts (1971) from the University of Alberta, and was called to the Alberta Bar in 1975.

Russ Brown, Director General
Alberta/NWT Region Human Resources Development Canada

Russ Brown was born and raised in Regina, Saskatchewan, and earned a Bachelor of Commerce degree from the University of Saskatchewan in 1966.

His career in the federal public service began in Winnipeg in 1970 with his appointment as an Employment Development Consultant with Canada Manpower and Immigration. Following a three year stint as Co-ordinator of Federal/Provincial Relations for the Saskatchewan Region, in 1976 he accepted the position of Metro Manager, Canada Employment Centers, in Edmonton, Alberta.

He was named Director of Operations for Employment and Immigration in the Alberta/NWT Region in 1982, a position which he held until his appointment as Director General, Employment and Immigration Canada, Nova Scotia Region, in October 1990. He worked closely with the National Transition and Renewal team, as co-chair of the Regional Framework Working Group.

In December 1993, he was appointed to the position of Director General, Alberta/NWT Region, Human Resources Development Canada, which he presently holds.

Danny Foster
Agriculture Canada

Danny Foster is Director Client Services for the NISA Administration within Agriculture and AgriFood Canada, Winnipeg. Mr. Foster has been with the NISA Administration for two and one half years. Previous to that, Mr. Foster was with the Policy Branch of Agriculture and AgriFood Canada in Ottawa for a period of seven years. Mr. Foster began his public service career with the Auditor General of Canada in 1978.

Ron Carlson
Communications Energy & Paperworkers Union

Ron Carson is the Administrative Vice President of the Communications, Energy and Paperworkers Union of Canada. He was elected to this position for the last two terms; prior to this elected position he was the Vice President in the Communications Workers of Canada.

Ron worked for SaskTel, the telephone company in Saskatchewan, starting in 1969. He held various jobs from a Lineman, Cableman, Districtman, Installer, PABX Installer to a Technical Assistant and also gained the support of his colleagues and was elected to various positions within this Union Local, such as steward, chief steward, vice president of the Local, until 1980 when he became a full time staff representative for the Union.

Ron has organized new members into the Union, educated Local members to fulfil their obligations and negotiated collective agreements.

He has always believed in analyzing problems, determining directions and implementing action.

His philosophy is based on the principle of don't sit on you hands and become part of a problem, work to become part of the solution. He believes that Union's must work to influence governments and employers based on their ideals and principles.

Carey Barnowski
Public Service Alliance of Canada

Carey Barnowski has worked with Revenue Canada since 1989. Carey is on the union executive and is the Chief Shop Steward for the Union of Taxation Employees, a component of the Public Service Alliance of Canada.

Carey is involved in a pilot study of telework for Revenue Canada. Employers, including governments, are seeking alternate work environments as a way of cost saving. Unions want to exercise caution and study these new work arrangements before totally embracing them. Inside your registration jacket, the document "Alternative Work Environments" is the joint union/manangement document created as a part of this pilot study.

Donna McWilliams
Telus Management Services Inc.

Donna McWilliams is currently the Director of Human Resources, representing business Sales with Telus. In the seven years Donna has been with Telus, formerly AGT Ltd., she has also worked as the Manager, Environment, Health and Safety, the Manager, Employee Relations and as a Senior Advisor, Human Resource Planning. In her career of over twenty years in the field of human resources, she has worked in three provinces Manitoba, Saskatchewan, and Alberta and has held numerous positions, at the Director, human resource specialist and generalist level. Donna has extensive experience in employee relations, recruitment, compensation, planning, collective bargaining, health and safety, organizational development and design. She holds professional certification as a Human Resources Practitioner and has a post secondary education in Business.

Tom Lockhart
AVL Automatic Vehicle Location Systems Ltd.

Tom Lockhart is President and General Manager of AVL Automatic Vehicle Location Systems Ltd. He is responsible for all aspects of project management, systems design and implementation, business development and general operations. Mr. Lockhart has extensive operation expertise in the development and implementation of technological services focused primarily in the surveying, navigation and positioning industries. This involvement has led to a series of innovative and unique technologies that have been applied in a wide range of industries. Mr. Lockhart has extensive project management experience resulting from 20 years involvement in private service companies. This experience has extended to a wide range of projects in Canada and abroad.

Mr. Lockhart has authored numerous technical and operational papers on positioning, navigation and vehicle locating. He is a registered Professional Engineer and a commissioned Alberta Land Surveyor.

Bob Russell
University of Saskatchewan

Bob is a Professor at the University of Saskatchewan, where he has been located for the past 12 years. His principle areas of interest are in the fields of the Sociology of Work, Industrial Relations, and social change. His recent publications include, Back to Work? Labour, State and Industrial Relations in Canada, (Nelson: 1990) and various articles which have appeared in the Canadian Journal of Sociology, the Canadian Review of Sociology and Anthropology and Labour/Le Travail. Other work has been published in the Annals of the Canadian Industrial Relations Association (1995) and in the volume Labour Pains, Labour Gains: 50 Years of PC1003 edited by Gonick et al (1995).
Mr. Russell has just completed a new manuscript entitled "More With Less: Transitions to Post-Fordism in a Staple Economy", which deals with the impacts of technological and organizational changes in the Canadian mining industry.

Lucien Royer
Alberta Federation of Labour

Lucien Royer is currently an Executive Director at the Alberta Federation of Labour. He is also the Health, Safety and Environment consultant for the International Confederation of Free Trade Unions (ICFTU)based in Belgium. He co-ordinates programs throughout the world and represents the ICFTU at the United Nations and other international agencies with respect to health, safety and environment. For the last 10 years he has co-ordinated the efforts of trade unions in promoting the uses of information technology to improve workplace conditions. He recently co-ordinated an ICFTU technology task force in Belgium to help develop a communication plan of action for trade unions in 137 countries around information superhighway issues.

Mike Sheridan
Canadian Labour Congress

Mike Sheridan is the Prairie Regional Representative of the Canadian Labour Congress and is based in Saskatoon. He has held this position since 1993. Mr. Sheridan is also a member of the Communications, Energy and Paperworkers Local CULR-1. Prior to this, Mr. Sheridan worked for six years in Ottawa with the Education Services of the Canadian Labour Congress and the Research and Policy Division specializing in Pensions, Drug Testing and the Canada Labour Code.

Mr. Sheridan has been a key member of the planning committee for the Prairie Forum on the Information Highway and Workplace Issues.

Collective Reflection
on the Changing
Workplace

Réflexion collective sur
le milieu de travail
en évolution

National Forum

The Information Highway and
Workplace Issues:
Challenges and Opportunities

British Columbia Report

Agenda

08:30	Registration
09:00	Welcome, Introductions, and Overview
09:30	Panel 1 — Home Based Work

Presenters — **Tom Roper**, Barrister and Solicitor;
Alexander, **Holburn**, **Baudin** and **Lang**
John Steeves, Barrister and Solicitor Steeves and Company

This example involves an arbitrated settlement between **Simon Fraser** University and CUPE on issues concerning home based work. Concerns about supervision, employment standards coverage/enforcement and workplace organizing were identified during the arbitration.

Tom Roper represented SFU and **John Steeves** provided research for CUPE in this arbitration.

10:15	**Break**
10:30	Small Group Discussions

Participants from a variety of perspectives will have an opportunity to discuss, in small groups, new and/or unique working relationships available through new technologies. As well, participants will have an opportunity to discuss the implications of such working arrangements on employee authorities and accountabilities, performance measures, supervision, labour standards coverage and enforcement, labour representation, and employee social interaction.

11:45	Small groups reports
12:00	**Lunch**
12:45	Panel 2 — Globalization

Presenter — **Sid Shniad** for **Rod Hiebert**, President, Telecommunication Workers Union and Vice President, BC Federation of Labour

Agenda (continued)

	This example examines the issue of contracting out of work that can be done by unionized workers in BC. On the one hand, companies argue that they must seek lower costs if they are to remain competitive in a global market. On the other hand, the union argues that there are workers who can do the work in BC and that those jobs should remain in the hands of unionized workers in BC.
13:30	Small Group Discussions
	Participants will have an opportunity to explore ways of resolving the tensions that exist between reducing costs due to global competitiveness and concerns about continuing high levels of unemployment and underemployment. As well, participants will have an opportunity to discuss the roles and responsibilities of employers, employees and government in the provision of training and skill development.
14:45	**Break**
15:00	Small groups reports
15:15	Preparing Presentation to the National Forum on Saturday

Saturday, February 22nd

08:30	Using the video conference technology
09:00	Opening Remarks, **Honourable Alfonso Gagliano**, Minister of Labour
09:15	Presentation and questions from regional forums
11:00	Respondent Panel

Welcome, Introductions and Overview

Bill Gardner, Regional Executive Head of Human Resources Development Canada for the BC/Yukon Region, introduced Manisha Bharti, who is studying for a Bachelor's Degree in International Relations and Development at Harvard and is a member of the Advisory Committee on the Changing Workplace. Bharti noted that the committee was launched in August 1996 by the Minister of Labour, Alfonso Gagliano, to gather information from Canadians about "the changing nature of work." Committee members came from across the country and from every sector of the work force. What events preceded the National Forum?

The Committee's report, *Connection Community Content: The Challenge of the Information Highway*, included a minority report by the labour representative, Jean-Claude Parrot, whose opinions departed significantly from those of the other committee members. The National Forum was convened to address questions raised by both the committee and minority reports. Including representatives of both business and labour, its intent, said Bharti, was to provoke a "full discussion on the impact of technology on work."

After a day of face-to-face discussions among the 30-40 participants in each of six locations across Canada, the forum would spend day two "using technology at its best," that is, attending a cross-country video conference in order to hear what was going on in the other regions. The end product of this two-day effort, said Bharti, would be twofold: to report to the Minister of Labour, and to further inform the work of the Advisory Committee.

Facilitator Michael Goldberg of the Social Planning and Research Council of BC noted that when the Forum was called together it became clear that there were many "different issues and strong feelings" to be addressed. He expressed appreciation for people coming on short notice and reading a lot of material to prepare for discussions that "provide a sense of where people are coming from and how we will proceed into this brave, new world." He then reminded participants of a sentence in the report noting how important it would be for business and labour to agree that work-place changes involve "choices by those affected."

Goldberg provided an overview of the day, which would include a morning panel on home-based work and an afternoon panel on globalization, both to be followed by small group discussions and reports back on "critical points" to the larger group. He then introduced the morning panelists, Tom Roper and John Steeves, lawyers on either sides of a case involving an arbitrated settlement on home-based work between Simon Fraser University (SFU) and the Canadian Union of Public Employees (CUPE).

Panel 1: Home Work

Facilitator Michael Goldberg introduced the two panellists, Tom Roper and John Steeves as lawyers on either side of a case involving an arbitrated settlement on home-based work between Simon Fraser University (SFU) and the Canadian Union of Public Employees (CUPE).

John Steeves, barrister and solicitor, was CUPE's lawyer in the SFU-CUPE case on home work. He introduced himself as having been involved in the SFU-CUPE since it began in 1988. He told participants that the fact the case went through two stages of the legal process, the BC court and BC Court of Appeal, is "a sign of the importance of the case in labour history and to the community at large."

Steeves began by defining home work as paid work performed at the residence of the worker. Home work can require the use of a computer, telephone, sewing machine, or other equipment, often purchased at the expense of the worker. He stressed the difference between people who work at home and workers who provide home care -- for example, nurses -- but who are not home workers.

Steeves pointed out that home work is already being talked about in the media, and often misrepresented. He quoted articles and statistics and held up images on home work from various print media, including *The Vancouver Sun* and *The Globe and Mail*.

> *"There is this image of home work that you can be productive intellectually, with a baby in your arms, sitting at your computer. I think that that should be seriously questioned by employers and employees. This image of home work as something that can be done in combination with family work is a very vexing question and one of the tensions within home work."*
>
> *John Steeves, Barrister and Solicitor, Steeves & Co.*

In particular, he cited figures used by Stephen Hume in a story in *The Vancouver Sun* that seven percent of the adult workfare works at home, which, he noted, is "quite high." He also cited statistics from a *Toronto Star* article on home work that found work was done at home in 17% of Canadian households which, he noted, does not necessarily indicate the presence of home workers.

Steeves then read from a list in a *Globe and Mail* article on the impacts of home-based work for employer, the employee and society:

- Advantages for employers: productivity and morale improve; fewer interruptions; pool of potential workers expand; less office and parking space needing; etc.

- Disadvantages for employers: Some loss of direct control; distraction at home; training and counselling costs.

- Advantages for employees: commuting time reduced; work schedules fit personal and family needs; transport, food, clothing and child care costs cut; etc.

- Disadvantages for employees: social interaction reduced; isolation increased; electricity and other home costs may rise.

- Advantages for society: traffic accidents and costs of new roads reduced; work and family life harmonized; fuel consumption cut; air pollution reduced; etc.

- Disadvantages for society: businesses in office areas may suffer; tax revenue from fuel, goods and services may decrease.

Steeves said media images show writers at the computer with babies in their arms or cats perched next to sewing machines. These are "vexing" suggestions that home work connects smoothly with family life, which is more often not the case.

He then went on to list some important issues that arose while he was working on issues of the impact of the Information Highway on the workplace in the SFU-CUPE case.

He said enforcing employment standards is difficult. "How do regulatory agencies know what is going on in home based work? How do they control it?"

Steeves added that control is often also difficult from the union's perspective. Home work makes bargaining issues more complicated. Workers are scattered and workplaces are more difficult to organize. Collective agreements may also be difficult to negotiate.

Steeves, however, pointed to some successful examples, such as those undertaken by the BC Government Employees Union (BCGEU) which uses private e-mail lists and/or bulletin boards to link their members up and tackle the difficulties of disparate work sites.

Steeves noted that the issue of workers compensation for injuries or diseases that occur on the job is a very important one. For example, he said, how do we determine whether the home worker's backache is a result of lifting a heavy load of paper for his job rather than of lifting up the baby? An extra burden is put on the worker because the onus is on the worker to prove an injury is work-related.

In terms of municipalities, Steeves said home work raises issues of control, such as registering workplaces and collecting taxes. Similarly, with insurance, work items are often not covered by personal insurance. So, for example, a manuscript that a writer was working on at home, which gets destroyed in a fire, may not be covered by some insurance policies.

In summary, Steeves noted that the phenomena of home work raises the need for "new applications of old problems." It is significant that home work leads to a merging of work and non-work related issues, and that it blurs the line of between contractors and employees. Steeves said the latter point is particularly evident from sections of the International Labour Organization's paper on home work he has managed to see.

Steeves noted in conclusion that the ILO document makes some controversial recommendations which could add dimension to further discussions on home work and the Information Highway.

Tom Roper, barrister and solicitor with Alexander, Holburn, Baudin and Lang, told participants he intended to speak more specifically to the case between SFU and CUPE, which ended in 1994 with an ambiguous BC Court of Appeal decision.

Roper stressed that the SFU-CUPE case dealt with the "high end" of home work. "We are dealing not with sewing machines but an individual at SFU who asked to use a computer at home in order to troubleshoot the mainframe computer at SFU," he said.

Roper said the collective agreement in place at SFU dealt with terms of work and was silent on the issues of place of work. There was no provision authorizing the employee to work at home. The union maintained the employer (SFU) was negotiating privately with the employee and bypassing the union. CUPE objected and refused the employee permission to take his work home.

Roper said the case essentially raised the question: in which cases can the employer ask the employee to work in certain places without being required to negotiate with the union? He pointed out that the debate has quite a spectrum in terms of context, ranging from whether an employer could call an employee at home to ask a question, to whether an employer can require an employee to work at home.

The Labour Board's position was fairly reasonable, said Roper, in that it maintains that the employer could ask the employee to work at home as long as it was a reasonable request. It was on this question that the case went to court. "By the time we went to the Court of Appeal, we were quite far away from the original facts of the case," said Roper.

The appeals court decision basically said that the employer can call an employee at home to ask a question and also require the employee to work at home, "but reasonableness will be the test." Roper said this essentially meant there is no clarity in B.C. as to when an employer can ask an employee to work at home.

"After five years of litigation, the results are unsatisfactory," he said, and it puts the matter back in the hands of business and labour to negotiate.

In closing, Roper said that, like Steeves, he also believed there are some serious institutional issues at play that must be dealt with, such as workers compensation for injuries, how to enforce strikes and work stoppages, and issues of commercial and residential zoning.

Discussion

Angela Julien of the Congress of Black Women asked for clarification as to the notion of reasonableness. For example, would the fact that the request in the SFU case came from an employee not constitute an example of "reasonableness" of request?

John Steeves responded, pointing out that that might be akin to an employee saying, "I'll agree to work for less wages than anyone else," touching on an issue that should be negotiated by the union on behalf of all employees.

Angela Julien told participants that in fact "reasonable accommodation" reminded her of a recent case regarding work on a religious holiday. Steeves said that cases involving human rights issues, such as religion, age and disability must be distinguished from issues surrounding home work. For example, he said it would be reasonable to allow a worker to work at home after an accident that makes it difficult for the worker to work outside the home.

Linda Pavan of Rogers Cable systems asked Steeves if the SFU-CUPE issue was ever brought back for negotiation at the next level of bargaining and was told it hadn't.

Joe Smeets of OPIEU Local 378, pointed out that the issues of home work also raise questions of locations of work. For example, an employee could request a new work site that involved going to another college, rather than working at home.

Steeves and Roper both discussed the implications of the lack of international law agreements. "We have no jurisdiction internationally," said Roper. Issues of home-based work can be very complex. Mobility of work means a telephone operator for a Canadian company could in fact be located in Havana.

However, Roper said he believed a balance can be negotiated between reasonable request - that an employer wants an employee to work at home - and reasonable refusal by the employee to do so. He told participants he believed the current framework of the legal system has enough flexibility to negotiate this.

Steeves pointed out that the ambiguities in the Court of Appeal decision is like the court saying, "You guys sort it out." He also said he thought home work could work badly or well. "It works well when unions sit down and negotiate terms," Steeves noted. He said in the case where teleworkers may only get paid when the phone rings, for example, "collective bargaining is the way to solve these problems."

Bruce Gilmour of the Canadian Labour Force Development Board pointed out that home work may work for people who would like to work but who cannot get to work, such as people with disabilities. Home work becomes a case of "getting work to people who cannot go to work," he said. He said there are other success stories of home work, such as

the case of three people he knew who continue to telecommute to work in Vancouver after physically relocating to the Cariboo for more affordable housing and a better quality of life.

Jeff Fox of the BCGEU said the SFU-CUPE case had sent shock waves through the labour sector and encouraged the union to grapple with issues of home work sooner rather than later. He cited the BCGEU's recently negotiated agreements regarding telework, which set provisions ensuring, among other items, that:

- The provisions of all collective agreements and relevant legislation continue to apply to an employee who teleworks;
- A separate, healthy and safe workplace;
- Pre-school children in the home must receive dependant care;
- You cannot telcommute more than three days a week;
- Home work must be voluntary.

Fox also noted that because they were dealing with people on the "high end" of home work, it was easier for the BCGEU to negotiate these terms. He pointed to some of the complications of dealing with, for example, fund raisers in the non-profit sector where people earn commissions on monies raised working at home. This, Fox said, is essentially "non-wage, non-union piecework" that is more difficult to regulate.

Sid Shniad, Research Director, Telecommunication Workers Union, said he believed the SFU-CUPE case was essentially about the union fighting for a right to have a say in decisions about home work. "Aren't you glossing over the issue of employer rights to act unilaterally?" he asked Roper. Roper responded that the union's right to collective bargaining was not at issue, but that the SFU-CUPE case was about what should happen when there is no existing agreement.

Steeves told the participants to keep in mind that the case had implications in broader contexts, such as for sewing machine operators who continue to earn extremely low wages.

Neil Graham, of Neil Graham and Associates and former editor of The Province, gave an example of successful negotiations around home work in the newspaper industry. A number of reporters had requested permission to work from home. After negotiations between management and the Newspaper Guild, it was decided to give home-based reporting a three-month trial. Three months later, two or three reporters decided against home work, citing among other reasons the disadvantages of desocialization and isolation. However, Graham said, some reporters preferred home work and continue to work from home, reducing overhead costs for the employer and resulting in greater employee satisfaction.

Graham concluded that the SFU-CUPE case of going through the courts is "a waste of time" while collective bargaining has resulted in some successes.

David Rice, Regional Director of the Canadian Labour Congress, cautioned against ignoring the fine line between the employee's willingness to work at home and "feeling like you have to." For example, he said a potential employee may be told "You can have this job but you have to work at home."

The moderator invited participants to continue the discussion over the break and adjourned the session. After the break, participants split into three discussion groups, their discussions to be based on the following questions:

1. What new and/or unique working relationships are, could become, available through new technologies in your work place? To which groups of workers would these apply?

2. What challenges or worker protection issues, if any, do you see in your work place for the implementation of such technologies? To which groups of workers do these challenges apply?

3. How can the challenges or worker protection issues be addressed? What are the roles of employers, unions, governments and employees in addressing worker protection issues?

Discussion group reports back: home-based work

Ken Chiang, a Labour Affairs Officer for the Human Resources Development Program (HRDC) and facilitator for the first group, talked about new and unique situations like virtual offices hooking up business and government, and mobile offices such as HRDC's labour affairs offices, which use laptops, cell phones and electronic databases to accommodate field work. He added, however, that HRDC staff also have offices to which they can return when necessary.

Challenges to worker protection include situations in which work hours and the divisions between home and work life are blurred, he said, resulting in an increasing expectation that workers carry cell phones and respond to calls regardless of time or place. New technologies have also led to an expectation of quick turnaround times. This leaves workers with no time to do research, he said, so that those with expert knowledge are at an advantage. A parallel concern exists regarding skilled vs. unskilled workers, he said. People with skills will be in a position to achieve, but we need to worry about people with lower skill levels. Technology also reduces face-to-face contact with government, with accompanying consequences.

The breadth and scope of these problems can be overwhelming, he said, but that is all the more reason to encourage an awareness of the pluses and minuses of technology. In meeting the challenges, several needs must be addressed including needs for equitable access to technologies, proactive responses to problems, voluntary participation in solutions and collaboration between all parties. A recent example of the last was a collaboration between the BC Government Employees Union and the BC government that was ahead of its time, he said without elaborating. He also identified a need to look at types of work and types of workers to determine which are suited to home-based work or telework.

The role of government, Chiang said, is to use foresight in identifying issues, negotiating agreements, and developing labour standards pertaining to home work. He called on the education system to respond to needs for skills development, especially for those who previously dropped out. And he called for clear definitions of words like "contractor" and "employee", which can refer to different work situations in different documents. Finally, he said government needs to use its leverage to promote equal access to the Information Highway.

Mary Jane Harper, the manager of the Employment Insurance Telecentre for Human Resources Development Canada and facilitator for group two, said that the issues are different for different kinds of workers. The group tried to consider the issues from the perspective of a person working on a server at home, a student and an independent consultant. What opens opportunities for one might close them for another.

The first challenge the group considered was isolation with attendant health and safety risks, as well as the stress of coping with learning new tasks alone. There is also a human rights issue, Harper said, asking, who has access to my home? As new technologies are introduced, it could become increasingly difficult for the independent consultant to purchase new equipment and train him or herself, leading to concerns about worker replacement. Work segmentation could pose problems when parts of a job are hived off and sent elsewhere, reducing a home worker's work load, and employee monitoring could raise other issues. An employer must be able to monitor how an employee is doing, Harper said, but employees have a right to be concerned about the way information gathered about his or her work is used. Finally, Harper identified a potential for increased marginalization of workers due to the difficulty of finding work and of physical barriers to workers' ability to unite for good working conditions.

The technology itself should be used to solve these problems, said Harper. This could be done by distributing information more widely, using the technology as an educational tool. The goal would be to make technology as familiar in the home as household appliances, she said, although that might raise problems as employers could not control who else in the home-based work environment would have access to the technology.

All parties have a responsibility to help us move forward into the learning society, Harper said. Employers must ensure that workers are not marginalized by providing training and support in the work place. Long discussions take place over e-mail with meetings never taking place. It is impossible for employers to know how people are coping psychologically, she said, unless they make an effort to find out. Unions have a responsibility to embrace the issues and work through collective agreements that can be used as templates in non-union settings. And governments must be bold enough to tackle the risks and turn those agreements into labour standards that will apply more broadly in the work force.

Mary Huitson, director of the HRCC Survey for Human Resources Development Canada and facilitator for the third group, noted, to a round of laughter, that the discussion was an exhilarating experience. Group three identified four points of concern, she said. First, we all agreed that technology must be viewed in a societal context. We must know how we want to deal with such issues as full employment, distribution of wealth and the overall health of our society in order to assess the impact of technology against our objectives.

Second, all stakeholders must be part of the discussions. For any conclusions to be meaningful, she said, we must recognize that there are more parties involved than just labour, big business and government and aim for full consultation.

Third, said Huitson, we must increase our focus on training. Most employers spend more on hardware and software than on training for those who use them, whether they are based at home or in the work place, she said, and that situation needs to change.

Finally, she said, government must accept its changing role in the creation of standards for training, software development and legislation governing things like intellectual capital.

Accepting that technology is here is not a matter of simply rolling over and letting it happen, she concluded. In B.C., people are embracing it.

Presentation on Globalization

Sid Shniad, research director for the Telecommunications Workers Union (TWU), presented a paper on behalf of Rod Hiebert, president of the TWU and vice president of the BC Federation of Labour. He prefaced his remarks by reading aloud an article from the Fall, 1996 issue of *Labor Report on the Americas*.

In summary, Texas postal workers discovered last year that much of their work was being done at a fraction of the cost in Mexican maquiladoras. The United States Postal Service (USPS) offers discounted rates to businesses that pre-sort and encode bulk mailings.

"What would be the impact on Canadian society if government and private companies made similar use of the technology that is available on the information highway (ie. major cuts in the number of employees) to reduce to reduce their costs and increase their productivity and become more competitive? This is what globalization and competitiveness are all about."

Sid Shniad,
Telecommunication
Workers Union Canada

These businesses contract their mail sorting out to American-based mail-sorting companies. Technology developed by the USPS and licensed to these companies allows the latter to transmit the image of individual pieces of mail to computer screens in the maquiladoras.

The Mexican workers enter the appropriate bar codes on their computer screens and transmit them back to the United States, where they are printed on the mail. The Mexican workers are paid $4 per day. One plant employing 180 people planned to increase to 1,000 by year's end. The job security of 30,000 unionized American mail workers is being undermined, the article stated, by technology developed at the expense of the American public through the cost of their postage.

This is an example of the Information Highway in all its glory, said Shniad. He asked if, given existing deficit problems, Canadian government agencies should consider using similar methods to cut costs, and what the overall impact on Canadian society would be if governments and private companies used technology in this way.

Some people argue that this approach is a necessary response to the need for cost reduction, said Shniad. This logic has hit the American telecommunications industry with a vengeance, resulting in thousands of layoffs. Telephone workers have found themselves caught in a downward spiral as salaried jobs have been replaced with lower-paid, non-union, insecure contract positions. But the focus on becoming the lowest-cost providers is shortsighted, even from a corporate perspective, he said. Furthermore, pursuing such a strategy ignores the detrimental effect that the destruction of jobs has on communities and society in general.

Exemplifying the former of these points, Shniad noted that last year BC Tel loaned 120 highly trained workers to US West in Oregon and Washington to help them bring their telecommunications network up to standard. The workers returned to Canada with photographs showing the extent to which the US West network had deteriorated as a direct result of corporate downsizing. A formerly trained work force has been cast adrift and replaced by low-cost contractors. With little or no experience, no commitment to the company and a precarious economic position, these contractors took short cuts and used cheap materials to maximize their income. Although the use of contractors led to astronomical profits in the short term, US West's service has deteriorated to the point that it is facing massive fines from its regulator, which is undoubtedly why our members were sent to repair [their] system, said Shniad.

In the same time period, BC Tel has also been downsizing. But, although service quality has deteriorated due to staff cutbacks, restrictive contract language has prevented BC Tel from contracting out services. Despite this restriction, BC Tel has enjoyed an uninterrupted series of record earnings for the past five years, said Shniad. And, ironically, the same language that prevented BC Tel from going down the same road as US West has ensured that the Canadian network is capable of delivering the services of the future, as it would not be if it had been allowed to degrade like its American counterpart.

In addition, downsizing has extremely negative effects on communities, said Shniad. The destruction of a well-paid employment base means that the wages of fewer workers circulate through our communities. This affects the profits of local grocery stores, clothing shops and restaurants. Property values drop and the overall viability of the community is threatened. As a society, said Shniad, we must question whether companies should be allowed to destroy jobs for no good reason at a time when the official unemployment rate is 9.7% nationally.

Companies that want to sell goods or services in a given jurisdiction should be required to furnish employment and other benefits to the people who live there, said Shniad. We are promoting this perspective in the building of Canada's Information Highway. This builds support for the affordable, high-quality service that Canadians need and ensures decent, secure employment for those needed to do the work of supplying the services. This approach builds on our strength as a country, he concluded: "Under our game plan, everyone wins."

Reports back from Breakout Groups Re: Globalization

The participants were divided up into three working groups, and each was asked to think about answers to questions regarding globalization in three broad areas, as well as any other issues they felt should be discussed in future:

1. What are the potential impacts on local employment prospects due to technological change? Where do you see possible employment gains or losses?

2. What role should employees, employers, unions and government play in addressing changes and adaptation in the workplace?

3. What role should individuals, unions, business and government play in the provision of training for adapting to the changing workplace?

After the breakout sessions, facilitator Michael Goldberg introduced the three facilitators for the group, commenting that the content of the report backs would be interesting as he had heard both heated discussion and laughter emerge from the three breakout rooms.

Ken Chiang of Human Resources Development Canada was the facilitator for Group 1. He reported that his group had discussed potential increases in employment prospects in areas such as software and bio-technology.

He noted that Canada could increase employment by creating environments in which individuals can more easily adapt to technological changes. For example, the short-term nature of Canada's corporate culture must change. He said there is a need for individuals to acquire the requisite skills for new technologies and the private sector must be encouraged to spend "a lot more dollars" on private sector training than it presently does.

He said his group also discussed how, given the environment of globalization, unions have limited tools with which to organize. Chiang said governments must invest in job creation and give incentives towards rebuilding of small towns by encouraging growth in new areas. Governments should also encourage investment in people by corporations, perhaps by giving incentives and certifying corporations that offer training. He said training programs should reach a broad base and be delivered using technology. Training must also take into account requirements of the local communities.

In closing, Chiang said participants in Group 1 felt it is important to recognize that globalization means we are looking at more than a supply-and-demand kind of market.

Mary Jane Harper of HRDC gave the report back for Group 2. Harper said it was easier to identify employment losses over gains that globalization has yielded. But there have been some gains, she said. For example, globalization of the film industry has brought jobs to British Columbia. She stressed that Canada must attempt to take advantage of opportunities that exist within the country, between provinces, rather than beyond our borders.

Harper said that when discussing roles and training, the need for education "came out big." She said that Group 2 participants had joked about the negative implications of being "perpetual students" in the "old days" as opposed to how it is essential today for us all to become lifelong learners. She said all sectors must prepare individuals to be lifelong learners.

Group 2 participants talked about the need to answer the following questions: "What are our common values? What is our vision of the future?" For example, Harper said, we need to know what the role of volunteer activities is to be in our society.

She said the role of government is to offer strategic support, such as giving tax incentives for banks who offer loans to buy computers. Government should not just look at policies in terms of deficit reduction but as investment in people for the future.

Mary Huitson of HRDC facilitated Group 3, which, she noted, did not really stick to the questions but covered the areas more generally. Participants of Group 3 had identified two main areas of importance: job losses and the stresses and quality of work as a result of globalization and technological changes.

She noted that training is not a magic bullet, but that we need to identify what results in job creation. She stressed the need for community-based job development versus strategic-based, and the need to transcend political time frames and look more than five years ahead when planning.

Huitson said government should be creative and use its purchasing power to put pressure on companies. She said new technologies have allowed different kinds of work to be performed by one person but that there hasn't been any proper training to keep up with the changes. She suggested that governments use the tax levy system to encourage training programs, and that unions can also be more flexible with regard to training programs.

Harper said problems arise when there is too much stress on training rather than on learning. This tends to reflect an importance placed on things over people. She also said participants should talk about employment security rather than job security, recognize diversity as well as different kinds of training -- not just school-based training.

She concluded by relating how participants in this group had broached but reached no conclusions on the issues of jobs moving abroad.

Back-up exercise

The facilitator Michael Goldberg suggested that since many questions had been unresolved in the break-out groups, participants could try another exercise. Everyone was asked to write the one point on a card they would absolutely want to see included in the National Forum.

However, efforts to group the points into overall theme areas were deemed unsuccessful. The organizers said they would read the cards overnight and present workable options the following day.

Summary of the day

Goldberg then summarized key themes from the day. He noted that participants had expressed a need to identify long-term goals, values and vision first, such as full employment and greater income equality. Technology should be used to enable us to achieve our goals, rather than us trying to fit our goals to suit technology.

Goldberg noted participants' concerns about who sits at the table in discussions around workplace issues and the Information Highway. He stressed that participants had raised the importance of involving others beyond big business, big labour and big government. He also said discussions must take into account the fact that parts of our economy will not feel impact of technology directly. Goldberg further stressed the need to move towards "reasonable accommodation."

Goldberg pointed out that many participants had raised issues of accessibility to technology, information, and notions of "the Learning Society." Measures must be taken to ensure equality of access between groups of people.

He also noted that participants repeatedly stressed collective agreements as the best practice to ensure labour standards.

As well, Goldberg noted that since issues of security raised by participants include loss of jobs and added stresses that new technologies bring to work, there is a need to look at ways to revitalize the social safety net.

Discussion

A number of participants offered comments following Goldberg's notes. David Rice of the Canadian Labour Congress cautioned that participants should be aware that providing access to technology will not necessarily "make all our problems go away."

Angela Julien, Congress of Black Women, said "employment security" may not be the right term. Goldberg proposed "economic security."

Bruce Gilmour of the CLFDB said semantics are important as they reflect context, stigma and biases. For example, notions of flexibility, security, and reasonable accommodation are not all they seem. Flexibility does not preclude security, and vice versa.

As there were no more comments, Goldberg thanked participants for attending and, after providing a brief explanation of the next day's schedule, adjourned the meeting.

Participants

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Industry Canada

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BC Government Employees' Union

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Changing Workplace

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Collective Reflection on the Changing
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Human Resources Development Canada,
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Marcy Cohen
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Al Dexter
Professor of Business Administration
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Bill Gardner
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Bruce Gilmour
Canadian Labour Force Development Board

Michael Goldberg
Social Planning and Research Council of BC

Neil Graham
Neil Graham and Associates

Mary Jane Harper
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Rod Hiebert
Telecommunications Workers' Union

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Heather Inglis
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Participants (continued)

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Joe Smeets
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Sid Shniad
Telecommunications Workers' Union

Jeff Fox
BC Government Employees' Union

Debra SlacoI
Information and Technology Access Office
Government of British Columbia

National Forum

The Information Highway and
Workplace Issues:
Challenges and Opportunities

Appendix: Discussion Paper

The Impact of the Information Highway
on the Workplace

*a paper to further the discussion of issues
related to the introduction of information technology
and its effects on Canadians at work*

February 1997

Preface

In its report, *The Challenge of the Information Highway*, issued in September 1995, the Information Highway Advisory Council (IHAC), in the first phase of its work, recognized that there was a need to improve Canadians' understanding of the economic, social and employment impacts of information technology. The Council also recognized the need for dialogue on these matters. For these reasons, the Council recommended that a national and regional forum be convened to share best practices and identify options for action.

Responding to the Council in the spring of 1996 (Building the Information Society: Moving Canada into the 21st Century), the federal government stated that it would convene a national forum so that Information Highway issues related to employment and the workplace could receive wide public discussion.

The National Forum on the Information Highway and Workplace Issues, taking place on February 21 and 22, 1997, is the result of the recommendation by the Information Highway Advisory Council and the action taken by the Government of Canada. The topics to be discussed at the forum are:

- the impact of the Information Highway on the workplace,
- new approaches to work that utilize information technology, and
- working to ensure worker protection.

This document has been prepared by the IHAC Steering Committee on Workplace Issues and Lifelong Learning, as part of the mandate of the second phase of IHAC, to carry forward the discussion. While this paper does not necessarily reflect the views of all members of either the steering committee or IHAC as a whole, it does present relevant labour and business perspectives on these issues. Labour and business members of the steering committee contributed to the preparation of this discussion paper.

The main part of this discussion paper is composed of information from business and labour on a number of key topics related to this issue. These cover the subjects of non standard forms of work, such as part time work, contingent or contract work and telework, hours of work and the distribution of work time, self-employment, polarization of income and opportunities, and education, training and skills development. The business and labour sections each conclude with thoughts on what should be done to ensure that Canadians are equipped to deal with the impact of the Information Highway on the workplace.

Members of the Council will be participating at the Forum in the discussion of these issues. The views gathered at the Forum will be incorporated into an IHAC report which will be issued later.

Veronica Lacey (Chair)
Jean-Claude Parrot (Co-Chair)
Steering Committee on Workplace Issues and Lifelong Learning
Information Highway Advisory Council
Ottawa
February 1997

Introduction

The term Information Highway is a metaphor used to describe the vast array of information and communications technologies that are dramatically changing the way Canadians live, play and work.

Parts of the Information Highway have been in place, and a part of our lives, even before we began using the term. But it is the exponential increase in computing power over the past 20 years, coupled with dramatic reductions in cost, that have made computerized applications an essential part of the daily lives of Canadians - at home and at work. Digitization has made it possible to exchange information and conduct transactions electronically over great distances. The convergence of information and communications technologies is bringing about radical change in the way we do business and work.

Submissions from Labour and Business

Issues related to the new technologies brought about by the emerging Information Highway are wide ranging and encompass many aspects of our lives. What follows are submissions from labour and business on the key issues:

- Non standard areas of work
  - part time work
  - contingent or contract work
  - telework.
- Hours of work and distribution of work time
- Self employment
- Polarization of income and opportunities
- Education, training and skills development.

However it should be noted that even the definitions of the issues may be seen differently by business and labour. This underscores the need for further dialogue.
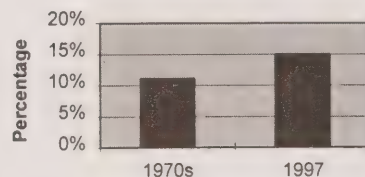
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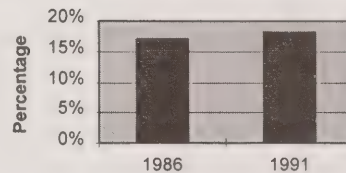
Contingent Work
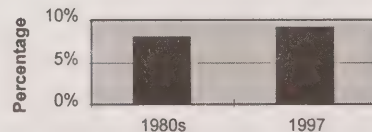
Self Employment

Suggestions as to what might be done in terms of future actions are at the end of each group's part of this paper. It should be emphasized that these perspectives do not attempt to capture fully all the views of either business or labour with respect to these issues. However, it is believed that the material put forward will help further discussions on these matters. Much of this material was provided to the Information Highway Advisory Council by the constituent groups and can be thought of as being representative of these two communities. That having been said, it must be added that these perspectives have not been sanctioned by any organizations representing business or labour.

Context

Employment and Unemployment

There are differing views about the contribution that new technology makes to employment and unemployment levels. In Canada, over three decades, there has been a shift to higher levels and longer periods of unemployment while, at the same time, there has been a shift in the nature of new employment opportunities.

Total Canadian employment has risen from 12.84 million at the low point in the economic cycle in 1992 to 13.67 million in September of 1996. That translates into a rise of 6.5 per cent. Paid employment (excludes self-employed) has gone from 11.37 million to just under 12 million - up by approximately 5 per cent. The Canadian private sector has added 935,000 jobs since 1992 - and about 220,000 since January, 1996. Due to the shrinking public sector, however, the aggregate increase has been less.

The growth of employment in Canada has slowed significantly from the high levels recorded in the 1960s and 70s. While employment grew at an annual rate of around 3 per cent in the 60s and 70s and 2 per cent in the 80s, it has grown only by 0.5 per cent per year since the beginning of the 1990s. This development is not unique to Canada - most other industrialized countries have also experienced slower employment growth rates in the first half of the 1990s. Employment growth has been strongest for prime-age workers, particularly women. On the other hand, levels of youth employment are still below pre-recession peaks and there has been a trend decline in the employment to population ratio of older male workers. In addition, those with the lowest levels of education have had consistently decreasing employment rates.

While high unemployment rates has contributed to more labour market insecurity, there is also evidence that jobs themselves have become less secure. Involuntary job losers have become a larger proportion of the unemployed. The proportion of the unemployed that have been permanently laid off has increased from an average of 38 per cent in 1976 to almost 48 per cent in 1995. In addition, despite the fact that overall, average tenure remains unchanged, the proportion of jobs lasting less than

6 months has increased significantly over the last fifteen years - from 46 per cent of all jobs over the 1981-85 period to 54 per cent over the 1991-95 period. According to the 1995 Work Arrangements Survey more than 1 in 10 persons stated their job was not permanent. Those in non-permanent jobs tended to be young, female and single. While small firms have contributed the most to employment growth and now account for a larger share of total employment, their employment creation record masks high turnover rates as reflected in large job gains and job losses.

The last three decades have witnessed increases in the unemployment rate, from 5.0 per cent in the 1960s to 6.7 per cent in the 1970s to 9.4 per cent in the 1980s and 10.2 per cent thus far in the 1990s. Most of this increase has been due to an increase in the

duration of unemployment, rather than a rise in its incidence. The average duration of unemployment increased to over 22 weeks during the 1990s - a significant increase from the 12 weeks experienced during the second half of the 1970s and the 18 weeks experienced in the 1980s.

OECD Work on Technology

The Organisation for Economic Cooperation and Development (OECD) has placed major emphasis on member nations understanding and implementing change. It notes that productivity growth and innovation are the keys to sustaining and raising standards of living in OECD member countries. Productivity improvement at the level of the enterprise (public and private) is essential to broad productivity growth in the economy. Research that has been carried out under the OECD activities on technological and organizational change/flexible enterprise indicates that continued productivity growth and improved competitiveness at the level of the enterprise largely depends on wider adoption of new configurations of four independent elements: business strategy, technological innovation, work organization and human resources management.

Choices made in these four areas will affect outcomes for enterprises, their workers, and will have impacts for social cohesion. The spread of innovation, effective and lasting high productivity workplace practices and the distribution between, and among, employers and employees of the benefits from increased productivity and improved enterprise performance will in part determine the wider distribution of income.

The OECD suggests that we need to emphasize the following:

- Increase our understanding on how human resource management and organizational practices in the workplace can both increase productivity and contribute to an equitable sharing of productivity gains;

- Identify impediments to the introduction of innovation and durable workplace practices;

- Identify mechanisms to encourage more widespread adoption of innovative and durable practices; in so doing, consider what employers and workers – the principal actors in the workplace – might do differently to foster productivity while promoting quality of working life;

- Propose and consider how public policy can support those changes.

A Labour Perspective on the Information Highway and its Impact on the Workplace

The economic impacts of technology obviously go beyond Canada: levels of unemployment in the OECD countries continue to be high (roughly 35 million) and there is no indication that they are about to go down in the foreseeable future. Moreover, in all

these countries, including Canada, there is a weakening link between economic growth and job creation that is closely connected to the effects of new information technologies on how work is done.

When labour priorities are being stated, in any context, the issues that always comes out on the top of the list are job creation and job security. The policy approach that always winds up on the top of the list is job creation. This concern with jobs colours everything else. Continuing high levels of unemployment, the inability of many people to find work in the new economy, is the context in which all these issues needs to be seen.

The issue of whether or not technological change in general and the new information technologies in particular are, in the long run, job killers or job creators is still up for grabs and evidence can be brought to bear on both sides of the argument.

Analysts such as Jeremy Rifkin make a pretty convincing argument that the new information technologies may be different in their impact from other waves of new technology that have swept through the economy. Among the reasons given for this are:

- the fact that the new technologies are being introduced in a context of very high unemployment and fierce international competition – a context very different from that in which rapid technological change occurred from the 1950s to mid 70s;

- the rapid pace of change, much more rapid, for instance, than the spread of electricity;

- the fact that the new technologies are not limited to one industry or one form of commerce but can be adapted to all activities;

- the fact that the new information technologies affect both demand for and supply of labour by making work more portable and moving it beyond some jurisdictions into others; and

- the fact that most positive forecasts about the impact of new technologies are based on historical analogies such as the fact that earlier in this century the new manufacturing industries were able to absorb the shrinkage of the agricultural sector, while there is no similar candidate waiting in the wings to serve the same role. In fact, the service sector, the big area of growth in recent years, is itself being affected by the new technologies.

However, whatever one's views are about the long term, there is no doubt about the short term, immediate impact of rapid technological change. They include polarization of income and opportunities, the deterioration of the work experience for many workers, and a range of social issues that need to be deal with now, not in the long term. Addressing these issues will require the use of the twin levers of collective bargaining through strong unions, and legislative reform through effective governments. Internationally, trade agreements should contain enforceable social clauses that establish minimum labour and

social standards in order to contain the downward pressure on these standards as a way to improve competitive advantage. In short, the excesses of market forces need to be constrained.

Non Standard Areas of Work

With respect to non standard forms of work, there should be little dispute about short term impacts, or the general direction that the technology is taking us. Labour is concerned with the nature of protections that are put in place as these changes occur. These protections should be in the form of legislated minimum standards that apply to all workers, and the removal or modification of some current practices that put people who are moving into non standard forms of work at a disadvantage. And, trade union participation in the process of technological and organizational change, is critical in order to shape changes in the interest of workers.

There are three forms of non standard work around which most discussion takes place:

- part time work as opposed to full time work,
- contingent work as opposed to secure work,
- telework or home work.

Part Time Work

With respect to part time work, the issue is not whether part time work is inherently superior or inferior to the historically more common full time job. It is clear that part time work is now a major feature of the economy, particularly among women, and its growth is connected to long term trends that go beyond any particular economy. As well, part time work meets the needs of some people better than full time work. However, there are three issues that are important.

The first is that a significant proportion of part time workers are involuntarily in this position and would prefer, perhaps need, full time employment. They are, in fact, involuntarily under-unemployed. The statistics on employment often hide this fact, and optimistic descriptions of the attractiveness of part time work in the new economy often underplay the extent to which this is something to which people have been driven rather than something which they choose as a desirable option. This leads to the view that the creation of full time work is still an important issue and needs to continue to be emphasized.

Second, part time workers often do not have access to equal pay and employment related benefits such as health care, pensions, and so on, and are often not able to join unions. Completely aside from considerations about whether part time work is desirable or not, it is important to look objectively at the conditions part time workers face and address them, preferably through legislative changes that extend to them the benefits that full time workers have.

Third, many part-timers work extremely variable hours.

Addressing the issues related to part time work also means looking at income issues for those who don't have enough work to support themselves. This should be done in relation to the broader issues of poverty and income inequalities, where answers may come in the form of social transfers or the tax system.

Contingent Work

As with part time work, contingent work sometimes meets the needs of people. However, the issue that needs to be emphasized is the extent to which this is not voluntary for many people. As with part time work, the issue here is that people who want secure work and are willing to work are increasingly being forced into contingent situations that do not meet their needs (e.g., short-term contract work and "own account" self employment which now make up about one in four of all jobs).

In particular, we need to think about the income implications of this situation, since for many people a secure full time job with benefits is necessary to meet family responsibilities. Second, we need to think about the implications of contingent work without regular schedules for balancing personal and family responsibilities. This is especially important for lower income people without the options that higher paid contract workers may enjoy.

Contingent and, therefore, insecure work is much more common among women, visible minorities and youth than among others. Since this is an area where market approaches have not been particularly successful in reversing historic differences, government action is important, to ensure that these differences are not allowed to persist from generation to generation and result in large and persistent gaps in income and opportunities. Again, minimum legislated standards should be designed to extend traditional benefits and protections to contingent workers.

Telework

Home work, or telework, is a phenomenon that is being fostered by the new information technologies. Public and private employers are promoting the advantages of telework for workers, business and society in general. However, there are problems with telework becoming a common phenomenon without a number of important built in protections.

To start, let us make a distinction between telecommuting, a phenomenon of skilled professional workers, and telework, which tends to be low status work done under less than ideal circumstances. Most business discussions of telework usually describe it as if it were telecommuting; it is often described as "knowledge work"; the advantages listed for workers include less travel, less on the job stress, more access to the labour market for

persons with disabilities and women with children, and so on. And for the community as a whole, a range of advantages such as less road congestion, less fuel consumption, and so on.

The reality is often different for people working in cramped conditions in low status, low paid work, often with child care and family responsibilities. This is especially so if they have few of the protections that on-the-job workers have, such as proper equipment, regular breaks, health and safety protection, not to mention the advantages that visibility provides. Many women wind up in low wage ghettos through telework and are unable to break out of it because they are socially isolated from other workers. They lack access to training. They often have to supply their own equipment.

To argue that they should not have access to protections that specifically address their conditions of work is to ignore the history of labour legislation, which has been put in place on the explicit recognition that the market will not protect workers if it raises labour costs, but instead works to drive labour costs and protections to the lowest achievable level.

The I.L.O. Convention on Homework (supplemented by a Recommendation containing guidelines for implementation), adopted in June 1996, addresses problems faced by a growing and often invisible workforce that is largely unrecognized in labour statistics and unprotected by legislation. It is the product of some six years of discussion, debate and compromise.

The Convention would oblige ratifying states to adopt, implement and periodically review a national policy on homework in consultation with employer and worker organizations. This policy would seek to promote equality of treatment between homeworkers and other workers in areas such as the right to organize, protection against discrimination, remuneration, health and safety, social security and maternity protection, and training. It also calls on governments to include homeworkers in labour statistics and labour inspection systems. In sum, the Convention/Recommendation represents a reasonably comprehensive international reference point that can be usefully applied to telework.

These are minimum conditions that represent a practical reaction to experience with problems around homework and telework, in both the public and private sectors. The only solution is explicit legislative protection, and enforcement of the legislation.

Hours of Work and Distribution of Work Time

The issues around hours of work and distribution of work time concern mainly the fact that there is a trend to the polarization of work in our economy resulting in high unemployment, some involuntary part time work which does not meet people's needs and

some work with involuntarily long work hours which interfere with personal and family responsibilities. The polarization is important, as is the fact that in many cases the extent of work hours is involuntary.

For those with unions, collective bargaining can sometimes deal with these issues, but for those without adequate representation, this is a social issue that can only be dealt with by governments. There is no indication that markets, unaided by government measures, can deal with this problem.

The recent report of the Advisory Group on Working Time and the Distribution of Work - made a number of recommendations in this area which the labour movement believes would begin to address these issues. Their report deals with issues of flex time and compressed work weeks, regulatory standards on hours of work and overtime, and improved retirement options. Action on the recommendations of this report would be an important first step in dealing with these issues.

Self-Employment

Self-employment is not inherently inferior to salaried work. And for some it meets a need. However, a great deal of self-employment is, in fact, involuntarily precarious work. In areas like Ottawa, for instance, where there have been significant layoffs in the public sector, there has been a blossoming of self-employment. In many cases these are people who were formerly employed and are now reduced to contract work, without many of the protections afforded to full time employees.

Business descriptions of self-employment use examples of highly skilled professionals to argue against basic protection for self-employed workers. The problem with this is that it denies access to this protection to large numbers of people whose positions are insecure, whose income is often low and unpredictable, and who are in danger of being exploited for their labour.

What is the answer? It is to ensure that self employed people have access to a number of benefits that are guaranteed to employed people by labour standards legislation and other protective laws. These would include the right to get medical, dental and life insurance coverage at decent rates, access to private pension plans and protection against exploitation by those who would use their precarious position to extract more work or lower wages than are justified.

How to ensure these protections, in practice, is not entirely clear. The reason for this is that "self employed" have never been covered by labour standards legislation, or thought to need it. However, in the new world of the Information Highway and rapid technological change, old categories are being dissolved. The issue is not people's formal legal status, but their need to be protected against exploitation and to have access to regular and stable income - as a right, not a privilege.

Polarization of Income and Opportunities

Rapid technological change, and the training and skills requirement necessary to keep up in a period of rapid technological change, are denying many people access to the kinds of jobs and training that would allow them stable income and interesting work.

One of the major social phenomena of our times is the gradual ratcheting up of unemployment to rates that would have been unthinkable even a few years ago. We are gradually creating a society in which a certain proportion of the population no longer have access to the tools to get good, stable jobs with decent incomes. Increasingly, new information technology allows employers to reduce their workforces in order to lower labour costs; and the smaller number of good jobs which remain often require the kinds of education and training that are only available to a few. The result is a tendency to polarization between "good jobs" with decent wages and working conditions and stability, and "bad jobs" with few of these.

The long run effect will be a third-world-style polarization into haves and have nots. If this is only beginning to be evident in recent years, there is no doubt it will be a lot more evident in coming years. To say that this is unconnected with the waves of rapid technological change we have seen in recent years, and the utter lack of adjustment measures to protect people from these rapid changes, is to deny the reality that we see all around us.

Ultimately, polarization can be countered only if governments are committed to full employment and to a high level of labour and social standards.

Part of the solution to this problem is to make sure that everyone has access to high quality, up-to-date training that will allow them to stay in the labour market as technology changes and existing jobs and skills are replaced by new ones. As the National Training Survey has demonstrated, employer-provided training in Canada is roughly half the level of that in the United States, and significantly below that in many other advanced industrial countries. Left to itself the market will never correct these problems. The answer is committed government action to raise the training effort in our society, through mandatory minimum training rights for all who want them, employer-provided through a payroll based tax, supplemented by ambitious government-funded training programs for those who are not in the work force as "employees".

In a high unemployment society, training is not the only answer, of course. Decent income protection for those whose income and employment possibilities are limited is also important, as well as an explicit commitment to a full employment economy through economic stimulation and job creation programs.

Education, Training and Skills Development

With respect to education, training and skills development, there is a general concern that voluntary private sector training has not been adequate as a response to technological change and needs to be supplemented by minimum standards. The recent National Training Survey done by the Canadian Labour Market and Productivity Centre (CLMPC) demonstrated that the level of private sector training in Canada is quite a bit lower than in the United States, which in turn is lower than in other advanced countries such as Germany. The solution is legislated mandatory employer-paid training and skills development and upgrading.

One recent development in which the labour movement has participated has been the growth of sectorally-based human resource development organizations which focus on training across a sector. The best known of these are the Sectoral Skills Council in the Electrical/Electronics Industry, and the Canadian Steel Trade and Employment Congress (CSTEC), but there are now well over two dozen of these organizations, in both the goods producing and service sectors of the economy. These organizations are useful in developing training standards which are likely to be widely accepted across a sector, since they are developed by people active in that sector; and to the extent that they deal with the issues of "poaching" and the "free rider" problem, they tend to raise training levels in an industry. However, they do not offer protection to workers in companies not participating, or to workers in sectors not covered by such sectoral councils. The labour movement favours a variety of approaches to increasing employer-paid training that would include sectoral councils, a levy grant system that would amount, in effect, to a payroll tax dedicated to workplace training, and legislated minimum training rights incorporated into the labour code and enforced the same way that minimum wages, hours of work and overtime and other labour standards are now enforced.

What Should be Done

Non-market based approaches to dealing with the short-term impacts of technological change are still viable, and in fact necessary. In the short-term, there is no dispute that market-driven solutions to unemployment do not work. They ignore the responsibility of both governments and employers to create jobs. While there may be differences in preferences, there is no doubt that the absence of government measures in the face of rapid technological change results in higher levels of unemployment than otherwise.

The labour preference is for clearly stated labour standards, as part of the regulatory process and enforced as minimum rights. The analogy here is to earlier standards such as hours of work, health and safety, minimum wages, and so on. While the issue of what these minimum standards might be is still up for debate, the question of whether there should be standards is not really a debatable item. Leaving working conditions to the market is not an acceptable approach. There is much greater scope for international co-ordination around labour standards. In the past, the role of unions has been to "take wages out of competition" in many industries in the sense that widely accepted minimum

standards, gained through collective bargaining, make it impossible for employers to compete on the basis of driving wages and working conditions down and force them to compete on some other grounds, such as quality, design, and so on. A similar dynamic could take hold in the international economy, but only if governments understand that they cannot leave these issues to market forces.

Fundamental to the labour perspective is a stress on the key role of trade unions in shaping workplace change. Progressive labour laws are needed to facilitate the extension of collective bargaining to "non standard" workers. In this regard, the federal government has included in a bill currently before the House of Commons amending Part I of the Canada Labour Code (Labour Relations), a positive measure concerning off-site workers. This provision would facilitate union opportunity to access, organize and service off-site workers. As of this writing, the bill (C-66) has not yet been passed. If it is, with the off-site worker section intact, it will be a good first step towards assuring the representational rights of these increasingly numerous workers.

Training issues are critical, and the evidence in Canada to date is that voluntary employer-based training has not been an adequate response to rapid change. This is an area where government intervention in the form of legislated standards is important. As well, in an era of change and dislocation, better adjustment and transition mechanisms are needed. The federal government could act as a model for other jurisdictions on issues related to technological change - but only if it understands its responsibility clearly. To date, the confusion about the relative roles of market and government suggest that this understanding is not really present - hence the importance of clear recommendations on government's role. One area where government's role could be applied would be in the area of mandatory employment impact statements, similar to environmental impact statements, to accompany any large economic activity. This would stimulate public debate on priorities, and perhaps bring public pressure to bear on both government and employers to give employment creation a higher priority.

The minority Report submitted by Canadian Labour Congress Executive (CLC) Vice-President

Jean-Claude Parrot to the Information Highway Advisory Council and the government (September 1995) contains a number of recommendations that address and elaborate upon the foregoing issues. A useful starting point for "what should be done" would be a serious government response to these recommendations aimed at action and implementation.

A Business Perspective on the Information Highway and its Impact on the Workplace

The business community welcomes the opportunity to express its perspective on "Work and the Information Highway". Building the Canadian information society is a formidable challenge that will require all stakeholders to put their minds and energies

together to harness change for the broadest common good. The options from the business viewpoint are clear: we can embrace change, exploit its opportunities, adjust to it, and mitigate its costs, or we can resist it, try to protect old paradigms, and be overwhelmed by it.

How Canadians respond will be critical. Increasingly, a good technically networked infrastructure is becoming a precondition for market success. The way work is performed in this networked environment is directly linked to productivity, quality, and the overall competitiveness of the nation. The stakes, therefore, are high if we fail to adjust to the new realities.

Business recognizes that the transition to the information society is not smooth. For many, it is a difficult, painful process. Solutions, however, come from a focus on the future, not the past. In this paper, business presents its views on how the workplace is changing, and what is required to harness the positive and creative uses of information technologies to enrich our working lives. There are no "silver bullets", no "quick-fixes". What is needed is leadership to show Canadians the path to employment security, and the skills they will need to prosper in the workplace of the future.

Technology and Employment

Any discussion of the impact of technology on employment should begin with a review of the facts. While popular authors such as Jeremy Rifkin fuel the notion that information technology is an overall "job killer", comprehensive studies conducted by the OECD and more recently, by the Conference Board of Canada, do not support this conclusion.

The OECD Jobs Study, released in 1994, considered and rejected technological change as a cause of high and rising unemployment in OECD countries. According to the Jobs Study, forecasts that the next wave of technological change will cause high unemployment have been made repeatedly over the past 200 years. So far, such forecasts have been wrong. The Jobs Study concluded that when technological progress accelerates, so do growth, living standards, and employment. While some unemployment always accompanies the introduction of new technology, in the past the additional jobs created directly and indirectly have been sufficient to not only replace those lost but to expand employment substantially.

A recent study by the Conference Board of Canada sheds light on the Canadian experience. Its findings indicate that industries that intensively purchase and use IT goods and services have created more jobs than industries that do not and are outperforming these industries in terms of production. All of the major occupational groups in the high IT intensive industries have grown, while most of those in the low IT intensive industries have contracted.

Studies such as these are important for several reasons. First, they reinforce the view that resisting technological change and focusing only on protecting existing jobs is not the right response. Job growth will depend on how we diffuse and exploit the enabling potential of information technologies. Second, they point to a role for government that focuses on creating an environment that supports job creation rather than creating jobs directly. Key to that environment is a flexible regulatory framework that enables both employers and employees to adapt quickly to change, and promotes a broader range of entrepreneurial work arrangements.

Several other important observations come from a review of overall Canadian employment statistics.

While unemployment rates have been rising, a greater proportion of Canadians have held jobs. In 1966, when unemployment was low (3.4%), only 55% of Canadians over the age of 15 considered themselves part of the work force; in 1989, that had grown to 67%, and 65% in 1995. Compared to the past, more Canadians now have work, and the gender balance is better. If we want to have a high proportion of the population working, along with the low unemployment rates of the past, we need to seriously consider the range of employment arrangements that will make this a reality.

Even in the face of high unemployment statistics, there are sectors in Canada that are growing. Some, such as software, are already predicting a shortfall of 20,000 workers by the year 2000. Others, such as those emerging from the Information Highway, are more difficult to assess. However, our inability to precisely forecast new growth sectors doesn't mean they don't exist.

The Internet itself has become a platform on which new markets can be built. Just as explosive growth followed the introduction of the mainframe in the 1950's and the PC in the 1980's, the Internet is poised for similar growth in the 21st century. For example, a recent forecast by the International Data Corporation (IDC) suggests the US Web-based training market will expand from $19M in 1995 to $1.750 M in 2000, a CAGR of 147%. (IDC Study: *The Market for Web-Based Training: A Look at Current Developments in Internet and Intranet Course Delivery,* November 1996, http://www.idcresearch.com). Our challenge is to anticipate such opportunities, and exploit their benefits for Canadians.

Good Jobs versus Bad Jobs

The debate on employment and technology is not just about the number of jobs, but their quality as well. The private sector is often criticized for using technology to replace workers and for using technology-enabled work arrangements to outsource work into lower-wage ghettoes. This is frequently characterized as the "good jobs" - "bad jobs" debate, with calls for political action to force business to maximize both the quantity and quality of their job creation. At the most basic level, we should acknowledge that all jobs

are good jobs, and our basic objective as a society should be to create more employment opportunities. At the same time, it's important to recognize that different parts of the private sector contribute to this overall goal in different ways.

Recent studies by Statistics Canada (John Baldwin article in *Canadian Economic Observer,* November, 1966 and *Research Paper # 93* by Garnett Picot and Richard Dupuy) have shown that while large corporations have contributed relatively fewer net new jobs than smaller business, the jobs they have created have been better paid, and the relative wage gap between large and small companies is widening. Smaller companies hire more workers, but partly because their labour productivity is relatively low. They remain, however, a vital source of new job creation and provide important avenues for personal growth and financial rewards. The spread of smaller companies and of self-employment also fosters the kind of flexibility that is essential to a competitive economy in the information age.

In the long run, we all want to see more and better jobs. In the meantime, we must be careful to ensure that any policy levers we use to encourage better quality jobs do not inadvertently hurt our efforts to create jobs in larger quantities, or vice versa. Above all, we must not discourage all forms of job creation by trapping ourselves in outdated definitions that come from the industrial era.

Non-Standard Areas of Work

One of the difficulties in addressing "non-standard" forms of work is definitional. The term itself reflects an industrial model where any movement away from a full-time, permanent job with 9 to 5 hours, is viewed negatively. Rather than benchmarking to the past, we should be asking what are the "standard" forms of work that are emerging in the information society. What they will look like is still a matter of speculation, but it is unlikely they will march in lock step with today's paradigm. Rather business sees a move away from the "one size fits all" to a growing diversity of work arrangements.

A review of today's statistics suggest the growth of alternative work arrangements is by no means as dramatic as some have predicted based on anecdotal evidence. There are trends, however, that are worthy of comment.

Part-time Work

About 18.5% of the employed labour force is classified as "part-time" (defined as less than 30 hours per week with a single employer). This is not significantly higher than five or ten years ago (18.1% in 1991; 17% in 1986). Labour force surveys indicate that a large majority of part time workers (2/3 or more) voluntarily choose to work part time.

Compared to the 1970's however, a larger portion of today's part time workforce would prefer to work full time. Part time is particularly common among youth. In 1995 about 4 workers in 10 under the age of 25 held part time jobs. For many, the primary reason is school attendance. However, young people are also the group most likely to report being employed part time because they cannot find a full time job.

Part time work is reported by employers to be motivated by factors such as a lack of full-time work, cost control, employee preferences and a desire for flexibility. Part time work offers people at various stages of life an opportunity to better balance work with other responsibilities, particularly women who wish to both rear children and keep their skills relevant and up-to-date. One interesting trend is the opportunity leading employers are offering to move from full to part-time employment as a way of retaining workers who require additional flexibility.

Contingent Work

Temporary or contract work is defined as a job with a specified end date. About 9% of employed Canadians fall into this category, compared to 8% in the 1980's. Technology may enable temporary or contract work as it facilitates the transfer of information that allows short-term or contract workers to move easily in and out of organizations working on project, tasks or teams.

Temporary work may be precarious or contingent. It is becoming clear that temporary or contract workers may develop their own careers by moving through jobs or placements, developing increased skills and gaining access to continuous training.

Temporary service firms are an interesting illustration of a growth sector related to temporary and contract workers. Once seen as only providing "low-skill" assignments, temporary-help businesses today include highly qualified professionals. They are becoming outplacement providers and training providers.

Temporary help firms are "employers" and covered under all applicable employment-related legislation. Many offer access to benefits, training, and valuable assistance for workers in transition.

Individuals choose temporary help companies for a wide variety of reasons. They may accommodate the worker's needs for a flexible schedule; they may provide temporary placements for individuals who want to balance school, or child rearing; they may provide opportunities for expanding skills and gaining specific work experience; and they may offer a window into permanent employment for those who prefer a full time position.

An initiative following the temporary help model has recently been launched by the private sector to help unemployed graduates develop skills and experience. Known as "Career Edge" it offers internship opportunities with participating employers - and uses job postings on the Information Highway as part of its matching process.

Telework

Telework is one of the most outstanding features of new forms of work resulting from information and communication technologies. It revolutionizes the traditional concept of work where presence or "face time" was the best way of evaluating productivity. In today's climate, where attaining results is what matters, telework, including new concepts such as desk-top conferencing, allows companies to work closer to the market, respond faster to customer demands, and reduce overheads.

Another important feature of telework is the ability to choose the most optimal place and time to work. With the introduction of lap-top computers combined with powerful networks people can work while commuting, travelling abroad, or from home. Home is becoming a popular choice for many employees who find this increased flexibility helps to better balance work/life commitments.

The trend towards employees working at home is not without critics, who see it as a phenomenon that requires legislative intervention.

Perhaps the best illustration of a well-intentioned but misguided approach to regulation of telework is provided by the International Labour Organization (ILO). In 1996, with the support of the Canadian federal government and worker officials, the ILO voted in favour of a binding convention on homework. The convention was unanimously opposed by world employers, including those from Canada. Here are the reasons why:

- the convention uses one definition to cover the diversity of homeworkers around the world - from exploited low-skilled workers in developing countries to highly paid teleworkers;

- it assumes all homeworkers are vulnerable and will be exploited by employers if governments do not intervene;

- it introduces prescriptive rules that employers must follow, over and above those already in place for on-site employees; in Canada, employment standards legislation governs all employees who are in employment relationships and no additional regulations are required; and

- its scope covers workers who have the status of employee, but extends that coverage to individuals who would today be considered independent contractors.

In Canada, many individuals in employment relationships choose to work at home because if offers additional flexibility over how and when they work. To mandate through legislation that employers have written contracts in place that specify "piece and hourly rates, and the nature and amount of work and completion deadlines" is totally inconsistent with today's workplace realities.

Hours of Work and Distribution of Work Time

The most notable impact of information and communication technologies is at the level of the workplace. New workplace models are emerging based on networked infrastructures that bear little resemblance to the workplace of the past. Dr. Charles Savage, in his book *Fifth Generation Management: Integrating Enterprises Through Human Networking* helps to build a vision of what we can expect in the "Knowledge Era".

The workplace Savage outlines is fundamentally different from anything we have experienced before. It is not achieved simply by downsizing or restructuring. It involves real integration and is people dependent. It calls for new principles of management and employee participation that have to be learned...and old ones "unlearned". And it requires developing reward, recognition, and career opportunities for knowledge workers.

There are organizations today that display attributes of Savage's model. They have been labelled "high performance" and involve new management and human resource strategies. However, against the backdrop of anxiety and insecurity that many workers still feel, we have much to learn and much to do before the knowledge model finds its way into most workplaces.

One thing is certain, however. The traditional corporate culture that has served the industrial era well, no longer fits. It becomes critical, therefore, to approach the debate on workplace regulation from a different perspective. It is not a question of whether today's rules are "right" or "wrong". Rather, the questions should be what objective do the regulations achieve, and is it still valid in the changing workplace.

For business, the choice is not just between a rigid regulatory framework or the free reign of the marketplace. There is the option of a flexible regulatory framework, one that provides a common floor of protection yet removes outdated rules and barriers to change.

The debate around telework and hours of work are two excellent examples of old thinking that is out of step with the changing workplace.

The first question to be asked is "Why do we have rules governing hours of work?" The answers have been well documented by task forces at both the federal and provincial levels chaired by Arthur Donner for Ontario in 1987, and more recently for the federal government.

Several reasons have been advanced for such standards: providing a safety net to protect vulnerable workers, and reflecting a community norm. Clearly the safety net approach remains a legitimate justification - but a community norm built around an industrial model, is no longer appropriate. The notion of restricting overtime or even shortening the work week to encourage job creation is cited by the Ontario Task Force as originating at the end of the second World War when hours of work and overtime provisions were first extended beyond women and youths working in factories. Experience, particularly in Europe, has demonstrated the job creation potential for this approach is limited. It also makes no provision for the difficulties faced by employers in meeting customer requirements. There is ample evidence to suggest that job creation is better served by policy initiatives that would reduce burdens on the cost of jobs, such as payroll taxes, rather than attempt to mandate redistribution of overtime.

How should rules around hours of work be adapted to knowledge workers? What type of protection is required, and how can flexibility which increasingly meets both employers and employee needs, be introduced?

These are questions that warrant debate as reform of employment standards legislation is considered, particularly for highly-skilled knowledge workers where compensation systems are less oriented to hours worked and more to project and team outcomes.

Self-Employment

Statistics verify that self-employment and entrepreneurship are expanding. Since 1992, the number of self-employed has climbed by 325,000 - a gain of 17%. In 1995, the number of people who reported they were self-employed was greater than the number of people working for governments.

Technology clearly facilitates this trend. It has provided new tools which enable the self-employed to engage in business with clients located on the other side of the world. Access to global markets is no longer the domain of large, multinational employers.

A recent opinion survey known as *"Workplace 2000"* conducted by Angus Reid for the Royal Bank brings interesting insights to the topic of self-employment (*Workplace 2000 - Under Construction* - a national poll of 850 working Canadians conducted between July and August 1996; 62% full time 19% part-time; and 19% self-employed).

Nearly half of employees surveyed who work for companies think of themselves as "entrepreneurs" and 51% said they have considered starting their own business. As the study concludes, the spirit of entrepreneurship is alive and well in Canada.

Polarization of Income and Opportunities

Income polarization is also attributed to technology because of the divergence between highly skilled and unskilled workers and the compounding effect of better access to training for those already skilled and employed. A recent study by C.D. Howe suggests caution is required before we jump to conclusions in this area. The study found that, in fact, there is no increasing polarization of incomes and no shrinking of the middle class (*Are We Becoming Two Societies? Income Polarization and the Myth of the Declining Middle Class in Canada,* Beach and Slotsve, 1996).

Where technology makes a contribution to the issue of polarization, it is on the side of enabling the increase of skills and earnings. The appropriate response should be to increase access to training to close the gaps.

Education, Training and Skills Development

While there are polarized views among the stakeholders on the impact of technology and regulatory issues, there is more common ground when it comes to education, training and skills development.

Workers who use information and communications technologies require a stronger academic foundation and a broader range of technical and interpersonal skills. In a network-centric business environment, a key requirement for employees increasingly is a basic attitude towards work, the ability to work as part of a team in a positive, pro-active ways, and to value the diversity of others. For management, the ability to communicate, to demonstrate leadership, coaching, and listening skills grow in importance.

Moreover, as individuals are more likely to experience changes in jobs or employers, successful careers depend increasingly on the ability to learn new skills and versatility in using them. Learning is not just a phenomenon that occurs early in life in a formal school setting. It becomes lifelong, and critical to success.

The importance of continuous skill development is key not only to individuals who are in employment relationships, but to those who are self-employed and engaged in entrepreneurial activities. Focus on training and learning is now a critical success factor for all organizations, large and small.

The *Workplace 2000* survey suggests these changing realities are well recognized by Canadian workers. Nearly half of the employees surveyed are enrolled in training courses, and one quarter are preparing for a new career. People express both anxiety as well as excitement about the changes that are occurring. What they need is help in redefining success in the information society.

Today most of us still judge careers by the "jobs" an individual has with a particular employer or industry. In the future the benchmark will be our ability to sustain a career in a particular occupation or profession, and demonstrate marketable skills. What people do will become increasingly more important than where they work.

The way we develop skills will also change dramatically with the advent of information and communication technologies. The focus shifts from teaching and training - to learning and doing - and unlike teaching which is characteristic of classroom environments, the latter can happen anyplace, anytime, in both formal and informal settings. This has significant implications for how we measure investment in human capital and assess learning outcomes. Counting student days may be an effective measure of training but it has less relevance is assessing the knowledge, skills and abilities people acquire through training or on the job experience. Where new approaches are being developed, they share common characteristics. First, they include an assessment of the skills and knowledge individuals have, compared to a set of skills requirements developed from business and customer requirements. Success is measured by "closing the skills gap" which can be measured both at an individual and an overall firm level. Second, they attempt to build reward and recognition systems around skills development rather than jobs.

Much still needs to be done in the area of defining and evaluating human capital. But until we understand how to do this, we will continue to have difficulty in measuring the costs and benefits of education, training and skills development.

If knowledge is the source of wealth in the information society, then skills and abilities are our source of security. The challenge is to find ways for individuals, organizations, and the nation to focus on and value skills in the same way that we focus on jobs today.

What Should be Done

The fundamental changes that the Information Highway brings will require responses from all stakeholders: individuals, business, labour, and government.

Business advocates a course of action that commits Canadian workplaces to learn and to change. Working in the information society offers more opportunities, but less job security than we have known in the past. Some will find their way easily in this new environment; others will have difficulty and will need assistance. It's time for all stakeholders to roll up their sleeves and challenge their imaginations to find innovative approaches that meet the dual needs of flexibility and protection for workers.

Below are suggestions from the business perspective on how to take up this challenge:

- Management must lead the transformation to high-performance workplaces, emphasize the strategic role and value of human resources and create environments where employee innovation and creativity flourish;

- Employees must take responsibility for skills and career development; self-reliance is a key survival skill in the information society and forms the basis for lifelong learning ;

- Governments play a particularly central role. As Don Tapscott says: "they can act as a deadening change or a catalyst for creativity." If governments' attention is directed solely at protecting current jobs and preserving regulations that maintain current forms of work organization, the process of adapting to technological change will be more lengthy and more painful; and

- Governments must lead in building a culture in Canada that understands the link between skills and employment security and provides incentives for skills development to all stakeholders; in particular, they should help to build stronger links between individuals (both employees and self-employed), employers, and training/education providers.

In addition, governments should:

- reassess all workplace regulations, in coordination with provincial and territorial governments, to develop innovative approaches that provide "safety net" protections as well as the flexibility needed to adapt to change; consideration should be given to mechanisms such as accreditation that build self-reliance at the workplace level;

- explore options that encourage employee mobility;

- given that responses should be based on solid research regarding work and the Information Highway, we need to develop and share information on the following:

  - how to generate better information on employment trends, including updated definitions that reflect the changing nature of work,

  - how to develop better instruments for evaluating human capital, and assessing the cost/benefit of skills development in the workplace,

  - how to promote best practices that minimize any negative impact of technological change,

  - how to use models such as Career Edge and Temporary Help Services to speed workers' transitions by facilitating job search, job shopping, skills development and job placement; how best to support transition work for less skilled workers, and

  - how individuals, business, labour, communities, and institutions can work together to promote a culture that values skills and lifelong learning.

Conclusion – The Way Ahead

In examining the effects of the Information Highway on the workplace, people taking part in the Forum will have the benefit of the two perspectives that labour and business bring to these issues. The perspective that the Forum participants themselves will bring is equally important. This will be of great value to public policy makers and advisors such as Human Resources Development Canada and the Information Highway Advisory Council.

In these ongoing discussions, it will be important that technology not be seen in isolation. It is as much a part of the environment colouring our world today as fiscal restraint, globalization of trade and investment, and deregulation or reregulation of industries and business. Looking at technology without consideration of the other relevant factors may not produce the most satisfactory results.

What are some of the things that we *do* know about technology and the workplace in Canada? We know that the use of information technologies is growing by leaps and bounds and affecting the way we all live, play and work. Information has become an increasingly valuable resource. More and more of us are being described as information workers. We know that today almost half of the Canadian workforce uses a computer in the workplace. However, that number in itself does not necessarily signal that the Information Highway bus is already half filled.

Structural changes to Canadian society clearly are under way. It is difficult to label these simply as workplace issues. They cut across our whole lives – both our public and personal personas. Issues of employment security and income, balance of work, family and personal responsibilities, access to benefits, and sharing in the gains of productivity are all issues which concern Canadian workers – and must be dealt with on a daily basis. In turn, employers must face rapid changes in market demand, quick turnover times in product cycles, and sufficient flexibility and productivity in the work process and workforce. Therefore, examinations and debates related to the Information Highway and the workplace will have to consider the larger context as much as possible.

As the preceding material has demonstrated, labour and business do tend to view the workplace changes brought about by the Information Highway from different perspectives. In many cases, these perspectives hinge on whether issues are seen as opportunities or challenges; whether the new ways of working are voluntary or involuntary.

However, there is one area that both business and labour agree is a priority for Canadians. This is learning and skills development. Both groups feel that it is essential that we move forward in building necessary skills. Again, there are differing views as to which is the best approach to take in reaching our training goals.

Another point on which there is agreement is it will be essential that these changes involve choices by those affected – whether governments, business, working (or in some cases, non-working) Canadians. We may not be able to control the daunting forces of change, but it is in our collective best interests to try to manage them. This must begin with discussion.